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THE PSYCHOLOGY OF CAREERS

THE PSYCHOLOGY OF CAREERS

an introduction to vocational development

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to

HARRY DEXTER KITSON

Pioneer Vocational Psychologist

Good Friend and Guide

to a

Generation of Students

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PREFACE

This book replaces, but is not a revision of, an earlier volume, *The Dynamics of Vocational Adjustment*. It is a new book. It incorporates the results of significant recent research and theory development by psychologists, sociologists, and economists. It reflects fifteen additional years of studying and helping people to solve career problems, problems of vocational development, of vocational choice and adjustment. It draws on insights gained in supervising the research and clinical practice of graduate students specializing in this branch of the social sciences. The new book thus grew from the old, and has the same purpose, but in detail it resembles its predecessor only slightly. The new book has been developed over a period of six years as a course for students of psychology, education, and related fields.

In the preface to the earlier treatise on this subject, I acknowledged my special indebtedness to three of the pioneers of vocational psychology and vocational guidance: Drs. John M. Brewer of Harvard University, Harry Dexter Kitson of Teachers College, Columbia University, and Donald G. Paterson of the University of Minnesota, together with some of their associates on whose work I had drawn. Time has written *finis* to the career of Dr. Brewer, but the debt remains. Occasional conversations and correspondence with Dr. Kitson, in his active retirement, have increased the debt to him; and Dr. Paterson's professional activity and contributions, since the publication of the earlier version of this book, have made me feel as much at home at Minnesota as at my own alma mater.

I am indebted, in the development of the ideas incorporated in this book, to a number of present colleagues and former students at Teachers College, Columbia University. Dr. Charles N. Morris has shared with me the teaching of a course similar in purpose and content to this text; his interest and his insights have made the work of teaching and writing more pleasurable and the content clearer. Dr. Albert S. Thompson has shared these interests in many discussions, and with Dr. Morris and a group of students has helped me to plan the Career Pattern Study, a longitudinal investigation of vocational development which has contributed greatly to the refinement of many of the ideas in this text. Dr. Abraham Jacobs has contributed by reviewing the chapter on disabilities. Dr. Eli Ginzberg, of the Graduate

School of Business of Columbia University, has for several years shared and stimulated our collective interest in the problem of occupational choice. Dr. Donald Young of the Russell Sage Foundation has encouraged my excursions into sociology. A number of graduate students serving as research assistants on the Career Pattern Study have also helped greatly with the underlying thinking, especially those who worked with me in the field during the first year of that project and those who, during the year just past, collaborated in writing the monograph which sets forth the theoretical framework of the Career Pattern Study. The original group consisted of Harry Beilin, Junius Davis, Martin Hamburger, Charles Nicholas, Phoebe Overstreet, and Charles Warnath; the current group consists of John Crites, Raymond Hummel, Helen Moser, Phoebe Overstreet, and Charles Warnath. Miss Overstreet and Mr. Hummel have read the manuscript and made helpful suggestions. To these devoted and creative colleagues, and to others who have shared seminar activities with us during the intervening years, I am greatly indebted.

The following publishers and journals have graciously authorized the quotation of parts of their publications or the use of figures, the sources of which are indicated in the usual bibliographic style: the American Psychological Association, Harper & Brothers, J. B. Lippincott Co., John Wiley & Sons, the Princeton University Press, Richard D. Irwin, Inc., Science Research Associates, and the Stanford University Press. The followining journals have authorized the inclusion of substantial parts of articles written by the author and first published in their pages: the *Journal of Counseling Psychology, Occupations* and the *Personnel and Guidance Journal* (American Personnel and Guidance Association), and the *Teachers College Record.* The permission to use these materials is gratefully acknowledged.

Mildred Stuart, my secretary, has helped with the typing of the manuscript, ably seconded by Jean Thrane and Robert Brooks. Less obvious, but of crucial importance, has been the interest and support of a wife whose "conventional" or perhaps "interrupted" career as a bacteriologist has given her some background for grappling with a problem which arose during a day's writing, or for discussing some insight which came during an evening class or seminar, while enjoying a bedtime cup of coffee with me. Our common interest has not been lessened by the opportunities for field work in vocational exploration provided by two pre-adolescent and adolescent boys.

DONALD E. SUPER

Upper Montclair, N. J.
July, 1956

THE PSYCHOLOGY OF CAREERS

PART 1

THE NATURE OF WORK

Why do young people aspire to a particular occupation rather than develop some other vocational ambition? Why do they decide on the fields of work which they do choose? What are the problems that young workers, wearers of blue overalls or white collars, encounter in entering and adjusting to the world of work, and how do they solve these problems? What are the processes of becoming established in an occupation, and what factors affect the working of these processes? Why do people work, and why do some people like to work while others do not?

These are persistent and puzzling questions. All of us are concerned with them in our own lives or in those of the people with whom we live and work. They have in recent years been the subject of much study by psychologists (243, 303, 323), sociologists (55, 157, 217, 291), and economists (126, 164, 237, 239), and considerable thought has been given to them by teachers, counselors, personnel workers, social workers, and others engaged in human relations activities. But before these questions can profitably be discussed, one must understand the nature of work—that is, the nature of the activity and situation which is being chosen or to which adjustment is being made.

Most people think they know what work is. They have seen others do it; they have done it themselves. They may even, like Mark Twain, have been so unafraid of it that they have gone to sleep beside it. But actually most people have a limited understanding of what work is and of the world of work. Like the weather, it is something that most people enjoy and complain about, but also take for granted. Work is at once so commonplace that it is studied by few scholars and so familiar that practical men tend to believe that its problems can be handled by common-sense methods. Yet it is so little understood that society is constantly plagued by problems of work and occupation.

How can we, then, understand this little understood commonplace?

Part 1 of this book attempts to provide some understanding of the nature of work, first by surveying our present knowledge of *why people work* or what they get from work, and then by reviewing the *place of work in daily living*. These two short chapters are followed by a survey of the *types of work*, in an attempt to give some idea of the varieties of work and of the

ways in which occupations differ. A fourth chapter discusses the *place of work in the life span,* viewing it not only as a major factor in human life but also as one which changes as the individual progresses through the various life stages. This part thus prepares the reader for the bulk of the book which, in Parts 2 and 3, treats in detail the *course and cycle of the working life* and the *factors affecting vocational choice, success and satisfaction.* Finally, Part 4 attempts to synthesize this material, first for *theory* and then for *practical applications.*

1

WHY PEOPLE WORK

Why do people work? No question is more vital to society, as Hearnshaw points out (145): "a theory of work is basic to any industrial psychology. . . ." The *ready* answer is, almost inevitably, that men work to earn a living. This reason seems so obvious, and so sufficient, that the inquiry often stops there. People do have to have money to purchase the necessities of life, and the customary way to get money is to work for it. The logic seems compelling, and it is supported by the authority of the classical economists and their emphasis on economic man.

But many inquirers, both casual and serious, have not been satisfied to stop there. They knew of people who did not need to work in order to have money for the necessities, or even for the luxuries, and who nonetheless worked. They knew of others who worked at jobs or occupations offering less pay than other jobs they might have had. The economic motive was not enough to explain these cases. Other reasons for working obviously existed. Thus, thoughtful observers, counselors, public opinion pollsters, personnel research workers, psychologists, and sociologists have built up a body of data and opinion on man's reasons for working.

Lists of human motives, of reasons for working, of why people like or dislike jobs, are many in number and varied in content. Each student or observer of human nature seems to have preferred his own classification, his own terminology, with seeming confusion the result (153; 268: Ch. 3). When these lists and descriptions are studied, however, they are found not only to have a great deal in common but to be reducible to a few basic reasons for working or needs which are satisfied by work and occupation. The classification of reasons or needs which follows does not, therefore, correspond exactly to that of any other writer on the subject. It does, however, include the reasons which have been reported by other students of work, organized here in what seems to this writer to be the simplest and most meaningful way. It includes three major needs for which satisfaction is sought in work: human relations, work, and livelihood.

HUMAN RELATIONS

People are happiest when their relations with other people are satisfying. This does not necessarily mean that they are happiest

when there are close or affectionate relations, nor that satisfying relationships are a sufficient cause for happiness, but only that people like whatever relations they do have with others to meet certain needs. Let us look at these human relations needs.

Recognition as a Person

Much of modern living is anonymous. People live, travel, work, and play together in large numbers: the apartment dweller does not know who lives above him or below him, the worker driving to the factory does not know the driver of the car which tries to cut into the line of traffic ahead of him, the assistant bookkeeper does not know the clerk who sends him the forms from which he copies entries in his books or the other clerk to whom he sends them when they are entered, and the Dodger fan does not know the name or address of the man next to him in the stadium even though they may share the wild enthusiasm and deep dejections of baseball. As Roethlisberger and Dickson found in the Hawthorne Study (269), and as Warner and Low showed in the Yankee City Study (351), depersonalization seems to be an increasingly common characteristic of modern industry, one which creates serious dissatisfaction in workers.

This depersonalization is partly the product of the corporate nature of modern enterprise, in part due to the scope of present-day industrial and business activity, and it results also from the increasingly large concentration of people in a growing but settled country. It often makes the individual feel that he is lost in a large, complex, and impersonal machine (127). The shoe factory workers of Yankee City, after the industrial changes of the early twentieth century, found radical alterations in their status. They had changed from skilled workers, essential to production, to semi-skilled workers operating machines which almost any inexperienced worker could run. They had been production men known personally by the factory owner, and were now operatives who never saw or were seen by the out-of-town stockholders. Instead of employees whose fate was determined partly by a local owner who managed the factory as an enterprise which was important for its own sake, they had become employees in a factory which existed only to supply the number of shoes which a remote chain of stores would be able to sell. In this extremely depersonalized situation, and in a period of widespread unemployment, the factory workers, hitherto unorganized and antagonistic to organization, organized and struck. The authors of the study interpreted the strike as a desperate protest against depersonalization, against the status of mere cog in a big machine. The Hawthorne, Yankee City, and other such studies suggest that recognition as a person means preserving one's integrity.

This in turn requires *independence, fair treatment,* and *opportunity for self-expression,* this last factor being, however, more one of work activity than of human relations.

Independence involves autonomy, a degree of control of one's own behavior, actions, and activities. The need seems to be general in Western culture, at least in the United States (62, 64). To the worker in a factory or in an office independence means freedom to set the pace of work, freedom from close supervision and freedom to express opinions concerning the work being done or to be done, as Guest (129, 130) has shown with automobile assembly workers. To the managerial or professional worker it means opportunity to select those aspects of the job which should be emphasized, to determine priorities, to plan one's own work activities, to answer to others for the end result rather than for the method of attaining it. Everyone gives up a degree of independence in order to be a member of society. As Hobbes and Rousseau long ago pointed out, in a socioeconomic system as highly organized as that of the present day, independence is, of course, only a relative matter. But a common need in modern man is to find a life and work situation in which he can retain sufficient independence to preserve his own integrity, to be himself.

Reynolds and Shister quote an assembly worker's description of his work situation, illustrating the need for independence in factory workers: "The atmosphere is free and easy. There is not too much close supervision. They let you smoke, go out and wash your hands when you want, and we all walk around there as we please as long as we get the work out. You are at your ease." (257:11.) The typical physician, college professor, social or religious worker, or traveling salesman would probably find nothing noteworthy in this assembly worker's situation, but to the average department store salesclerk, restaurant waitress, or production line worker it would probably seem remarkable, while office workers would be divided in their reactions, depending on their place of work. The extent to which the need for independence or autonomy is met varies from one occupation and from one work situation to another; while it is often those whose needs are or have been frustrated who are most conscious of having them, as Knutson (179) has shown, this need appears in some studies to be strongest at the higher occupational levels, at which freedom is greatest (197), in others (62) to be uniformly important at all occupational levels in North America.

Fair treatment, to the present-day worker, means an equitable system of rewards based on known standards. People like to know how they are being judged and what the bases of judgment are, and they want to be sure that the persons doing the judging are impartial. To say this, however, is not

very helpful to the supervisor in the factory nor to the student of morale, unless standards which are acceptable to the worker are made specific. As numerous morale surveys in industry have shown, the typical industrial worker of today believes that length of time on the job and the quality of the work done are the most important criteria for judging merit, and he wants advancement and retention to be based on a combination of these. Personal factors still enter in, of course, for the younger worker tends to want quantity or quality of work to be stressed, and the older employee wants more weight to be given to seniority.

Fair treatment also means consideration of the needs of the individual, and loyalty in return for loyalty. These are combined in another of the examples cited by Reynolds and Shister in their survey of the job attitudes of semi-skilled workers. They quote a pressman: "They treated me swell when I was sick in the hospital for seventeen weeks last year. I had been there only a short time when I got sick but they paid my hospitalization . . . and kept my job open for me." (257:17).

Status

Just as relations with others must involve recognition of oneself as a person, as someone distinct and in some ways different from others, in order to be satisfying, so must they be such that the individual has some feeling of status (127). Prestige derived from status appears to be a need more of persons in the higher level and in the lower level occupations (62). Occupational status is somewhat complex, for it involves a variety of relationships. There are relationships with others in the same occupation (for example, nurse to nurse), in kindred occupations (e.g., nurse to physician, or nurse to aide), in other occupations (e.g., nurse to social worker), in the employing agency (e.g., floor nurse to supervisor of nurses or to fellow floor nurse), with clients (e.g., nurse with patient or patient's family), and with the general public (e.g., nurse with fellow passengers in a railroad car). In each of these relationships the status of the given person is revealed, sometimes as a superior, but at other times as a subordinate, sometimes as one who "belongs," but sometimes as an outsider, sometimes as one who has something in common with others, but sometimes one who is remote socially and psychologically.

Thus the nurse at work in the hospital is aware of the distance between herself and the physician: he expects to give orders, and she to take them. But, meeting in a social gathering where they are both strangers, they are aware of a good deal in common through their work with patients and in hospitals. When the nurse goes to a class reunion of her small-town high

school, she and others are aware of her superior status as one of the minority in her class who entered the professions. She is now superior to others, but subordinate, again, on returning to the physician's office—and these status differences are sometimes of central and sometimes of peripheral importance. Throughout all these contacts with others, however, the nurse is conscious of belonging to the profession of nursing, and to the larger family of public health occupations. Her title, her uniform, her distinctive cap, her badge, her command of a special vocabulary, the professional association to which she belongs, the journals that publish material relevant to her work, these and other things give her a feeling of belonging to something important. She herself thus becomes secure, significant, and self-respecting.

Not every occupation bestows all these benefits on its members, and not all members of an occupation react in the same way to its status-giving characteristics. Physicians rank higher on the prestige and income scales than nurses, they are more highly organized, and hence their profession bestows more status on its members than does nursing. On the other hand, the occupation of practical nurse ranks lower than that of graduate nurse, and hence provides less opportunity for the satisfaction of status needs than does medicine or nursing. And the chiropractor (348), as a member of a healing occupation which is illegal in some states, finds his marginal status a source of frustration.

Furthermore, different aspiration levels and backgrounds result in different reactions to the status-giving characteristics of occupations. The young woman, for example, whose physician-father wanted her to be a physician, who herself aspired to become a physcian, who failed for academic reasons to gain admission to a medical school, and who then entered nursing, might feel bitterly about the nurse's lack of status in dealing with physicians and think nothing of the status which being a nurse gave her. At the same time, the laborer's daughter who sacrificed to go to nursing school and is the only professional member of her family might derive great satisfaction from her general social status and not be aware of her subordinate role in the ward or the operating room.

A few quotations from interviews with workers, in which their desires for status are brought out, further illustrate this need. A factory girl interviewed by Gardner expresses herself as follows:

> I'd really like to work in the office. Isn't it funny the way office people treat factory people? I don't see any difference between them myself, but the office people think they are so much better than the girls who work in the factory. . . . I've noticed it with other girls too. I'll meet them at church and they ask me where I work. I tell them. They ask if I work in factory or office. When I say factory,

they say, "Oh," and then ask me if I don't get tired of it, and ask me if it's dirty. Then they take every chance to talk about office jobs. (116:11).

A painter, quoted by Reynolds and Shister, stresses the feeling of support derived from working with a congenial group of co-workers:

I like the men I work with. I help them along over some of the tough spots and we've got a smooth-working bunch. Of course, I don't get rich but I'm satisfied. (257:16.)

A young assistant head of a department in a large organization brought out the feeling of status derived from his work:

It's fun being assistant department head. The other fellows come to me with their questions about things, and the boss and I talk over some of our problems. Now and then he'll talk to me about something that's come down from higher up. It all gives me a feeling of being part of something big and important, you know, I'm in the middle of things, and I see lots of wheels going around and things happening. Some of them work better because of what I am doing.

WORK

The terms "work," "occupation," "job," and "position" are often used loosely and more or less interchangeably, but preferably with precise and distinctive meanings. Shartle defines the last three terms (285: 25–26):

An *occupation* is a group of similar jobs in several establishments.

A *job* is a group of similar positions in one plant, business, institution, or other workplace.

A *position* is a set of tasks performed by one person. There are as many position as there are workers, but there may be one or a number of persons employed in the same job.

The phrase *work activity* is used here in an attempt to denote the content of the work or job, as contrasted with the *work situation,* the context in which the work is performed and the people with whom it is done. In the case of a semi-skilled packer, for example, the work activity may consist of sitting by a conveyor belt, grasping a dry cell in each hand, placing it in a carton, grasping and placing two more batteries in the remaining compartments of the carton, placing the carton on the conveyor, grasping and positioning the next empty carton, and so on. Another packer may be in a packing room moving from one table to another as various types of items are trucked in and sent out for shipping, performing essentially the same operations of grasping cartons, placing objects, closing cartons, and setting them aside for the next operation. The work activities are the same in the two jobs

just described, but the work situation is different. In one, the worker has a regularly assigned workplace, his work is paced by the conveyor belt, and he has little contact with other workers apart from those stationed on either side at the conveyor. In the other, the packer has several workplaces with some freedom of movement from one to another, his work is not mechanically paced, and he is free to talk with other packers as he circulates among them. It is these human relations aspects of the work situation that are generally important to semi-skilled workers (whether blue or white collar) rather than the nature of the work activity (101, 124, 129, 130, 197, 222), although there are exceptions to this statement. It has frequently been shown that *work as activity,* as pastime in the literal sense of the term, is important to many adults at all occupational levels (107, 222).

Interesting Work Activity

Opportunity for self-expression seems to be more important at higher than at lower occupational levels (62, 222). It exists if the individual finds, in his work, outlets for his abilities, interests, and needs and if the work itself and the work situation permit him to play a kind of role that is in keeping with his self-concept (279). For example, a study of the relationship between occupations and hobbies brought to light a number of instances in which men whose hobby was the building and operating of model railroad systems were employed as accountants, bookkeepers, or other nontechnical workers (308). These nontechnically employed men in this technical avocation typically had engineering rather than business interests, as shown by tests, suggesting that their avocation was the result of a need for self-expression which could not be met by their jobs. Even in the cases of the model railroaders who were employed in technical jobs, it generally developed that they were dissatisfied with their opportunities to use their training and knowledge on the job, while the railroading hobby gave them more chance for self-expression.

Sometimes self-expression is more a matter of role and values than of outlets for specific types of interests or abilities. One young business executive, for example, resigned from his position in one company and would not consider another in the same industry because he felt that he could not do that type of work without giving people less than their money's worth: he did not want "to be a crook." On the other hand, he sought and made good in employment in another type of industry. The case of Tom Turner, described in Chapter 13, also illustrates aversion to one kind of role and the need to play another which is more congenial, for this mining engineer said: "I have to

live and work with people who go in for nothing but drink and sports, I have to work with things and numbers, when what interests me are the finer things of life, art, music, literature." Miscast in the role of rough-and-ready, like some of the Air Force instructors in Getzels' and Guba's study (119) of role conflict, Tom realized only after several years of work that he was an intellectual and an aesthete in a situation in which playing such a role was difficult. As Morse and Weiss have shown (222), the need for self-expression in work tends to be a middle class need.

Opportunity to use skills and knowledge helps to make work activities interesting. As in the case of the engineers in the study of model railroaders just mentioned, work activities which call for the use of special aptitudes or special training are more likely to be satisfying than those which permit only limited or little use of special abilities. It is interesting to speculate as to the reason for this. Perhaps aptitudes are dynamic, in that unused abilities create tensions which need reduction. Perhaps aptitudes which have been used in some way result in feelings of satisfaction with the relevant experiences, so that reward leads to repetition. The latter explanation seems likely, in view of what we know about learning, although Berdie (30) found abilities unrelated, but interests related, to occupational fields chosen.

Opportunity to express interests seems to operate in the same way. Long-term studies of the subsequent careers of college students who were tested as freshmen or as seniors, conducted by E. K. Strong, Jr. (304), have demonstrated the tendency of men to enter or shift to occupations in which their interest scores were high. Interest may be in part, as Strong suggests, the production of satisfaction through successful activity; aptitude leads to success, success results in satisfaction, satisfaction produces interest in the activity, and interest results in more activity. Or, as Darley and Hagenah (76) view it, with better evidence, personality, i.e., needs, values, and motivations, lead to the development of interests, which in turn lead to occupational choice.

For some people, the specific content of the work activity seems to be less important than its *variety* (130). What is meant by the term variety has not been investigated in surveys of job satisfaction, but in some cases in which its meaning has been explored it means change in the content and pace of the work, in others change in the location of the work. A good illustration of the need to find out what is meant by variety in work is provided by an interview with a screw machine operator: "On my former job I assembled the same thing day after day. It drives you nuts after a while. On my present job there's lots of change. I don't make the same screw all the time. I have to feed the machine with different stock and the product varies all the time in size." (257:18). Variety is all in the point of view!

Two other cases illustrate the importance of the *content* of the work activity. One is that of an electrical engineer who described a change of jobs thus: "I went with that company because they were working on color television. Then they dropped that work, and I was put on designing electric meters. That was work any draftsman could have done; it wasn't for electrical engineers. So I quit, and took this job where I can use my training in electronics."

A factory worker discussed another aspect of the problem in the following terms: "I like to build. I like to see something concrete that I made. I like carpentering better than machinist's work because a machinist spends a lot of time on little machines and when he gets it done, it doesn't look like much. . . . A carpenter builds big things like houses that really look like something" (257:19).

Apparently the engineer found himself working below his ability level with content which was too concrete and too simple. He changed to more abstract and more demanding work. The factory worker, on the other hand, failed to find satisfaction in the machine-shop work because he did not see the completed machine parts which he made put together with other parts to make a functioning whole. To do so required a degree of abstraction which was beyond his ability level. Instead he found more satisfaction in the work of a carpenter, because in this activity the integration of workers' efforts resulted in an entity which he could see and understand.

Satisfying Work Situation

The physical conditions in which the work is done, the way in which the flow of work is organized, the equipment and materials with which the work is done, also affect the worker's satisfaction in his work (13, 197). Viewed psychologically, these factors should be discussed along with the needs for status, for independence, and to preserve the integrity of the self, for the desire for pleasant and efficient working conditions is a desire for personal adequacy and for respect from others. A milling machine operator told how he was affected by an unsatisfactory work situation: "I had to carry a lot of stock. That was too heavy. . . . There was too much work. I'd get tired, I'd come home, eat supper, and fall asleep at the table" (257:20).

LIVELIHOOD

The need to earn a living is so obvious, and is so often stressed in popular writing and discussion to the exclusion of, or at the expense of other reasons for working, that it has been left until the end of this

chapter. The reasons for stressing it are clear enough; when one cannot earn a living, or when one's earnings are close to the subsistence level, other needs, such as those we have been discussing, lose some of their importance (62). But once the basic needs of livelihood are met, human relations and the work itself become at least equally important. In fact, once the standard of living is truly adequate, earnings continue to seem important (101) more because of their psychological and social significance than for their material effects.

The phrase "earning a livelihood" refers to two points in time, the present and the future. Current wages, salary, or fees are important largely because they fix the present standard of living. But what earning that income in that way does to future prospects of earning is also important. It is, in fact, more basic to the question of economic security than is that of current income.

Current Earnings

The absolute level of current earnings is important, because it determines the standard of living. The term "absolute" is used here in the sense in which the term "real income" is used in economics, to denote what consumer or capital goods the income will buy. This usage is made necessary in this context in order that it may be contrasted with the *relative level* of current earnings, that is, with how what the worker can buy with his income compares with what his neighbors can buy with theirs. These are terms which have in one case an economic, and in the other, a socio-psychological meaning. If the needs of the worker are to be satisfied by his work, the absolute level of current earnings must be sufficient to maintain an adequate standard of living.

The *relative level* of current income is more often, in the United States, a factor in work satisfaction or morale. The individual likes to feel that he is earning as much as others of his sex, age, experience, seniority, education, occupation, and productivity. He wants to be paid as much as his company can pay for his type of work, and as much as he might earn if he worked for another company. It at once becomes clear that this is a status need, one of human relations rather than of economics. It is helpful for some practical purposes to view it in terms of its manifestation, economically, but many managerial mistakes have been made because of failure to realize that this is basically a psychological problem.

Reynolds and Shister (257:21 and 28) quote several interviews that well illustrate both the absolute (economic) and the relative (psychological) current livelihood needs. First, a maintenance worker who felt unable to meet the cost of living with his wages: "No, I don't expect to stay with the company although it is an excellent place to work and I know everybody in the

shop and I feel I have an interest in the place. But the wages are too low for the cost of living nowadays. It's not the fault of the company because they can't pay any more."

A garment factory cutter brings out the psychological aspects of the problem: "Yes, I get a d——— good wage because I can afford most of the things I need. But I don't think it's fair compared to the sewing machine operators. These girls make over $1.50 an hour, and one cutter can keep twenty sewing machine operators going." An inspector also brought out the matter of productivity along with seniority: "I don't think I should be getting more right now, but after I've been there a while and if I'm doing a good job I think I ought to get a raise."

Security

In the minds of skilled, semi-skilled, and unskilled workers the term seniority connotes protection against layoffs. It is only as people reach middle age or later that they begin to think of security as provision for the postemployment years of old age. In the unskilled, semi-skilled, and even (to a lesser extent) skilled and white collar worker, the fear of being laid off, of having to seek another job, of having to move in order to find work, makes the need for security appear to be one of the dominant needs and one of the principal reasons for working (62, 231). While it is true that many workers change jobs with some frequency and relish in boom times, the need for security still shows through in their discussion of what they want to get from a job. Even in the case of boys and young men who have lived only in a period of prosperity, such as the high school boys of the Career Pattern Study (317, 323), security is mentioned first and with more frequency than anything else they want in a job.

In the thinking of the average person, security is best assured through seniority and through working in a situation which is minimally affected by seasonal or cyclical fluctuations in business. To the middle or upper middle class reader this may seem surprising, for at those socioeconomic levels it is more common to think of security as being achieved through hard work, ability, and thrift. But the beliefs that merit will be recognized and that enterprise and ability will win rewards are not as widespread in the lower or "working" classes as in the middle classes, just as the experience of being able to save for future needs is not as common. The unskilled and semi-skilled worker and many clerical and sales workers have, by definition, nothing outstanding to sell to an employer when jobs are scarce: their work can be done as well by many other reasonably conscientious and effective people. Weitz and Nuckols (355) have shown that one of the major reasons for which life

insurance agents resign is the feeling of economic insecurity. Security is therefore achieved only through such factors as having been on the payroll longer than others who might be let go, being on a salaried basis, and being in a place which has a steady flow of work, i.e., does not often have to reduce its labor force or pay on a produce-or-starve basis.

As workers approach late middle age—though sometimes earlier and sometimes later—they become increasingly aware of the hazards of old age. They see their own parents and their older friends retiring, released from, or leaving their jobs. They see them seek and, if fortunate, take some other type of work, often at less pay and at a lower level of responsibility. Finally, they see them contend with problems of increasing physical dependency when their financial resources are (except perhaps in the case of the upper middle and upper classes) least. The need for security then takes on a new form, but it is still the same need and the solutions are the same: seniority, a stable company or business, and resignation for the lower occupational levels; hard work, enterprise, and thrift for the middle levels.

Again, quotations from two of Reynolds and Shister's semi-skilled workers will illustrate some of our points. A structural steel worker speaks: "The plague of my life has been being laid off jobs and being forced to move around. A man ought to have a steady job in one place and stay there" (257:31). A milk driver expressed the same need but less optimism: "There is no such thing as steady work, no matter who guarantees it. In a pinch they'll all back out. You never know what next week will bring. So you might as well get the wage increase while you can" (257:32). These attitudes are in considerable contrast with that of a professional man of middle class background who, in a depression year, expressed the opinion that "It's not the job you have that gives you security, it's the jobs you can get," thereby showing his middle class confidence in merit and mobility.

CONCLUSION

Satisfying human relations, activities that satisfy carried on in conditions which are agreeable, and an assured livelihood, are three major desires which men seek to satisfy in work. The question is frequently asked, which of these is more important? To ask this is like asking which is more important, food or water? The answer in both cases is the same, that which is or has at some time past been least readily available is generally deemed most important. When earning a livelihood is difficult, the need for a livelihood is strongest, for survival needs are basic. Once they are met, the relative importance of these needs varies with the psychological make-up of

the individual and the subculture and circumstances in which he finds himself.

SOME ILLUSTRATIVE CASES

So far we have been concerned with principles and with data which document and illustrate them. In the social sciences, cases often help to make the principles more meaningful, and in vocational psychology (the psychological study of occupations) and vocational guidance (the orientation and counseling of individuals concerning occupations and careers) they give the reader a glimpse of reality which is unobtainable in any other way. For this reason three illustrative cases have been selected from Hoppock's study of *Job Satisfaction* (152), and are here reproduced.

The first case is one in which the need for human relations is dominant, perhaps as a result of childhood experiences of rejection, and in which the meeting of this need led to great satisfaction in the regular adult occupation. In the second case, the work activity and some of the conditions of work had great appeal, but the unmet need for satisfying human relations and for livelihood resulted in dissatisfaction. And in the last case all three needs are manifested and met, with great resulting satisfaction.

Case 1

This 44-year-old gasoline station attendant with an I. Q. of 76 is married and has two children, ages 19 and 17 (in 1933). He left high school as a sophomore to take a pottery job at $1 per day. After three years he left home with $3, wandered all over the States doing a great variety of semi-skilled jobs, and returned with $300. Since then he has worked as waiter, dishwasher, poolroom attendant, truck driver, chauffeur, and garage laborer. Now, as gas station attendant, sells gasoline and oil, greases cars, and changes tires. Works six days per week, with Tuesdays off. His employer never told him when to start or stop work, but he begins at 6:30 a. m. and ends at 10:30 p. m., for $20 per week (in 1933).

He is enthusiastic about his job, likes it much better than he thinks most people like theirs, would choose this job above all others. He likes to meet customers and to please them. He enjoys brief conversations with tourists from whom he picks up interesting bits of information. He is greatly thrilled by the surprise which he occasionally causes by telling a customer from a distant state that he has been in the customer's home town. He has never thought seriously about changing his present job. He would rather be on the job than doing his favorite recreations, reading and listening to the radio. He once resigned from a job rather than move from the community in which his "kids were doing well in high school." He has one brother and one brother-in-law who earn more than he but he says, "That doesn't worry me as long as I like my job" (152:81).

Case 2

This is a 30-year-old machinist, I. Q. 101, married, with children aged nine and five, suing for a divorce which was later granted.

This man has been employed by the same railroad since he was 14, when he became a machinist apprentice. He comments: "It's not education that counts on the railroad today, it's how well you can pass the buck. A conscientious man gets in trouble for not meeting his quota. The company never provides enough materials and men to meet your quota and so we all pass the buck. I do it too and I enjoy the excitement of it." He began work at 25c per hour and advanced steadily during his first eight years until he became a supervisor in charge of light repairs to engines at $250 monthly. He has since been transferred, demoted, promoted, etc., according to the fortunes of the railroad. At the time of the study (1933) he made 82c per hour, more than any of his brothers.

He likes the excitement of rushing through urgent repair jobs. He enjoys the challenge of meeting his quota in order to hold his job, even at the expense of poor work and passing the buck. His work is interesting "even when you get jumped on for something." He does not like the demotions and reduced earnings he has experienced. He does not like to get dirty, nor to work with people like his present associates who "will do anything the bosses want." His present superior is "two-faced and jealous." He does not know whether he likes his job or not, is satisfied most of the time, is seldom dissatisfied, but would like to change both his job and his occupation for better prospects of advancement. His measured interests (Strong's Blank) are like those of engineers, policemen, farmers, and purchasing agents (A scores). He does not know what he would do if he had his choice of occupations. He likes the way people treat him off the job (152:80).

Case 3

A 48-year-old general superintendent of a paper mill, I. Q. 103, married, two children, aged 22 and 14. Born and reared on a farm; disliked farm life as a boy. Mother's three brothers were papermakers. She influenced him in this direction. Graduating from high school, he took a job with his uncle as a laborer in a paper mill, and advanced from $1.50 per day to assistant superintendent at $32 per week in 16 years. Transferred to another company as general superintendent of 200 employees at $6,000 per year, and after two and one-half years took present job where he has been for 11 years at $6,000 and ample bonuses, making more than his father and brothers. If he could choose any occupation he would choose his present one, or else that of gentleman farmer. He is enthusiastic about his job.

He likes the technical problems connected with the special kinds of papers his plant makes. He likes his employers, his surroundings, the variety of work, the people he does business with. He does not like 24-hour responsibility, dealing with persistent salesmen, cutting salaries, and laying off employees. Nine years ago he turned down a similar job at a higher salary because he thought he would be better satisfied where he was—the other company was harder to work for. He has leisure activities, but enjoys his work more. He likes his community, likes the way people treat him away from the job. His measured interests are like those of engineers and farmers (as measured on Strong's Vocational Interest Blank) (152: 95–96).

2

WORK AND THE WAY OF LIFE

If the average adult's twenty-four hour day is examined to ascertain how he spends his time, we note that his occupation absorbs more of his time than does any other type of activity. Work in the factory or office, and travel to and from work take eight or nine hours of the twenty-four; work in the home, for the homemaker, consumes half again as much time. To this must be added varying amounts of work-related activity, such as union, trade association, or professional meetings; study, extra work done at home (e.g., the teacher's preparation of class materials and the engineer's computations which could not be finished at the office that day); and social activities which are work-oriented (e.g., entertaining visiting clients or consultants). Nine or ten hours of the wage earner's twenty-four are typically taken up by work and work-related activities.

Sleeping, eating, and other activities engaged in for the physical maintenance of the organism typically absorb another eight or nine hours daily. This leaves from five to seven hours for other activities. Work, clearly, looms larger than anything else in the daily life of the average employed adult. In *Middletown* (198:24–25), the Lynds characterize occupation as the "most nearly dominant single influence in a man's life."

But the place of work in adult life is not judged only by the time it takes. Other activities could be psychologically or socially more significant, even though taking less of the adult's time. Let us therefore examine the social and psychological significance of occupations.

WORK DETERMINES SOCIAL STATUS

A popular writer and lecturer on work, Whiting Williams, once pointed up the central role of work in modern life by comparing methods of inquiring about and "placing" people in England and America. In the old countries, he pointed out, the inquiry: "Who is that man?" might elicit the reply: "He's a Percy from Northumberland," whereas in North America the reply would more likely be: "He's an engineer with the Standard Oil Company." The English reply enables the informed person to place

Mr. Percy as a member of an old Norman family long established in a northern county; if his speech and manner are in accord with the name, he is labeled upper class, if they are not, then he is presumed to be either a less favored offshoot of the old family or a descendant of a quondam family retainer, with middle or lower class status. The American reply conveys the information that Mr. Percy is a college graduate, of middle or upper middle class, working for a corporation with a national reputation; it tells nothing of his social origins, but it does place him socially in the manner which, in our culture, is most common and helpful.

The point is that in a fluid, industrial society occupation is the principal determinant of social status. The work a man does tells more about him that is significant in this culture than any other single item of information. This same point has been made by scientific students of society. Hollingshead gives an example of social placement in his study of *Elmtown's Youth* (151:75). An Elmtown attorney was discussing the status system in that community:

> I discovered the first two months I was here that this town is class-conscious. When I first came here I went around to a few affairs and met some people. I don't remember where it was I met Homer McDermott of the four hundred crowd. One evening I was walking down the street and I saw him coming the other way. He held out his hand and said, "Good evening, Mr. Jennings." I saw he was disposed to visit; then he began to ask me questions something like this: "Mr. Jennings, I understand you are a new attorney in town."
>
> I said, "Yes, I hope to practice law here." . . . He asked, "Mr. Jennings, did you learn law in a law office?" "No, I did not." "Did you go to a law school?" "Yes." "Well, Mr. Jennings, where did you attend law school?" "I attended the University of Michigan Law School and finished last year." "Oh, you did! Well, that's the very finest law school, they say." Then he said, "Mr. Jennings, did you belong to a legal fraternity?"

Hollingshead's example of how a newcomer in Elmtown was quizzed by a local leader in order to ascertain where he fits into the scheme of things continues with questions concerning undergraduate education, social fraternities, and other nonoccupational experiences which have a bearing on social status. It is of interest, however, that the first questions have to do with occupation. The field of work, how training was obtained, where the training was obtained, his extra-curricular associations in training: these are the foci of interest. When these first hurdles were passed—the newcomer revealed a status acceptable to the established man—attention was turned to nonoccupational topics.

The relationships between occupation and social status have been confirmed in a number of objective studies which agree in showing a high cor-

relation between occupation and other indices of social status, correlations which are generally in the .90's (180:246).

Indices of Status

In order fully to understand the central role of work in modern society, and particularly the importance of work as a determinant of social status, we must briefly consider the nature of social status and the ways in which it is judged. A study of criteria other than occupation used in judging social status was made by Centers (63), who analyzed interview data obtained in a public opinion survey of 1,100 men selected as a representative sample of white Americans. These criteria are shown in Table 1, with the frequency with which each of them was named.

TABLE 1. CRITERIA (OTHER THAN OCCUPATION) FOR DETERMINING OWN CLASS MEMBERSHIP (63:91)

Criteria	%
Beliefs and attitudes	47
Education	29
Family	20
Money	17
Character and morals	2
Personality	1
Behavior, manners	1
Ability, achievements	.5
Others	2
Don't know	9

Centers' study makes it clear that values, education, and wealth are the principal nonoccupational criteria used today in judging social status, for "family" is itself judged by these same criteria and is significant only because it shows that origins as well as present status are significant even in the newer society of North America. The usefulness of these findings, however, is limited by the fact that these are the criteria people *say* they use; it is important also to ascertain what criteria are revealed by analyses of more objective data such as the actual behavior of individuals in a community or other social group.

A review of work in this area led Moore (221: 575–576) to classify the criteria of status as *wealth and income, level and type of living, common interests,* and *social affiliations.* All of these, he points out, are combined in a high degree in occupation. It is for this reason that the high intercorrelations

between occupation and other criteria have been found, and it is for this reason also that occupation is the most commonly used index of social status. That a person's occupation is in part determined by these factors will be seen later in this treatise; that his occupation does a good deal to determine these is the point here, to be elaborated upon shortly.

The methods devised by Warner and his associates (180:224–255; 352; 353) for the measurement of social status are an attempt to combine these various criteria into one scale. Their *Index of Status Characteristics* is a combination of ratings of occupations, source of income, house type, and dwelling area, selected because these relatively objective and easily determined data agree very highly with their method of *Evaluated Participation*, in which local judges place people in the economic scale according to their perception of the individuals' status in the community. The judges took into account such factors as the people with whom the person being rated usually associated, the part of town in which he lived, and the person's reputation in the community. A further criterion used by the judges was the status of one person when compared with another, that is, judgments were made of superiority, equality, and inferiority in status. As pointed out earlier, Warner found that occupation correlated highly ($r = .91$) with evaluated participation, so highly that one may conclude that most persons are as accurately placed socially by their occupation alone as by any more complex combination of indices.

Strata or Class?

Attempts to classify people according to social status have often been related to the problem of social stratification and class, and considerable controversy has developed among sociologists concerning both the use of terms and the question of class in America. Kornhauser has reviewed Warner's work in this area, together with the criticisms leveled at it by other sociologists (180:224–255), and Centers (63: App. II) has devoted an appendix to it in his psychological study of class, for it is primarily Warner's school which has brought the issues into focus. In view of the controversy, it will help our understanding of the place of work in modern life if we digress in order to define some terms and clarify our thinking.

The definitions of various writers on the subject have been reviewed by Centers (63: Ch. 2), who summarized his conclusions as follows:

> The conceptions that have been presented in the foregoing pages have been chosen as representative of the most outstanding views on social classes extant in previous writings. Unfortunately, in all of them except those of the pure subjectivists, classes are improperly and confusingly identified with social strata. Even though some like

Marx, Sorokin, and Zimmerman and others seem to have recognized a distinction between the terms at one place or another in their writings, the places where they have done so seem to be more exceptional than typical, and their frequent practice of using the words interchangeably has not promoted distinction between the concepts, but confusion of them.

It seems to the writer that much confusion can be avoided and great simplicity of conception gained if one always distinguishes clearly between stratum and class. Stratification is something objective; it derives, as has been indicated before, primarily from the economic system. . . . The process of earning a living imposes upon people certain functions, statuses, and roles. . . . Social and economic groupings and categories of people distinguished on the basis of occupation, power, income, standard of living, education, function, intelligence or other criteria are easily and properly denoted by the terms stratum and strata.

But these strata, as some have seen, are not necessarily classes. Classes are psychosocial groupings, something that is essentially subjective in character, dependent upon the class consciousness (i.e., a feeling of group membership), and class lines of cleavage may or may not conform to what seem to scientists to be logical lines of cleavage in the objective or stratification sense.

Sociologists also have attempted to distinguish between objective and subjective definitions (180:173, 226–227), but unlike Centers they have been interested in social position rather than in class consciousness. They have not clarified adequately their use of the term *class*. Moore (221:569), for example, quotes the following definition of class from a text by Sutherland and Woodward (326:368):

> Classes are inclusive, loosely organized groupings whose members behave toward each other as social equals and toward outsiders as social superiors and inferiors, and who as individuals either stay in the group to which they are born, or rise or fall to different levels depending upon the way their social attributes correspond to the values around which the particular class system is organized.

In the above definition, the first factor is one of *status* or power (superiority-inferiority relationship), and the second is one of commonality or difference in *values*. But social organization in America appears to involve a variety of systems of status relationships and of values. If examination of the relevant facts supports this conclusion, then one must draw the further conclusion that the term *class* is misused, and that what sociologists are referring to are *strata,* in a society stratified in various imperfectly related ways which do not result in classes. In a class system, there would be a perfect agreement between the various types of stratification.

What, then, are some of the important status or stratification systems in American society? They are suggested by some of the criteria of status mentioned earlier in this chapter: occupation, wealth, and income. To what extent do these status systems agree?

When occupations are ranked according to average income, deceptively simple lists result. Large owners and the fee-charging professions typically rank highest (26:335), followed by engineers, then other salaried professions not employed in business or industry, such as ministers and teachers, minor government officials, major salesmen, police and firemen, and so on down to waiters and peddlers. But it takes only a moment's thought or a brief examination of more detailed data to bring out the fact that one cannot infer wealth from occupation, or vice versa, in the case of a given person as confidently as such tables suggest: some engineers earn more than some physicians, some salesmen have higher earnings than some engineers, and some waiters earn more than some teachers. The two indices of status or power, wealth and occupation do not, therefore, agree completely.

A better indication of the fact that stratification as it exists in America has not resulted in a class system is provided by evidence as to the relationship between status and value criteria. College professors have more education and more independence in their work than do executives, but less pay and less prestige, while office workers have more education and more prestige than skilled workers, but less pay. But when occupations are ranked according to one criterion the general results agree substantially with ranking according to another criterion. Thus one generally finds, as Clark (26:335) did, correlations of about .85 between occupational income and prestige, suggesting that prestige is largely a matter of income. But when people are stratified by one of these criteria the results do not agree *completely* with stratification on the basis of the other criterion. Other factors, in addition to income, affect prestige. To illustrate: the undertaker has a high income but modest prestige. The diplomat has only a moderate income but a prestigeful way of life. The prestige and income scales are not identical.

Other examples of stratification which cut across these lines are provided by race, religion, and national origin. One can classify people by religious groups and get one type of stratification: Episcopalians and Presbyterians (the old established American religious groups) stand at the top of the list in income, prestige, education and most other criteria, while Baptists and Roman Catholics (the more newly established religious groups in America) stand near the bottom of the list in some sections of the United States. But there are persons, executives and physicians, for example, who stand high on the occupational scale but low on the religious status scale because they are of the Seventh Day Adventist, Catholic, Baptist or Greek Orthodox faiths. Or, one can stratify people according to national origin, with members of older American stocks, such as the English and Scottish, tending to be at the top of the scale, and those of the newer stocks from eastern and southern

Europe tending to be at the bottom of the scale. But, again, there are business executives, physicians, and engineers who stand high occupationally, but whose recent Slavonic or Mediterranean national origins and affiliations give them a low position when they are stratified according to cultural groups.

One is led to conclude, then, that American society is made up of a number of different strata, and that these strata are not all horizontal and parallel to each other. Instead, some are horizontal, some are nearly vertical, and some cut across the others at various angles. The result is that most persons belong to a number of different social strata, play several social roles, and whether or not one appears as a high, medium, or low status person depends on which type of stratification (occupational, religious, or cultural; wealth, common interests, or style of living) is being done at the moment. The type of society described therefore is not a class society in the strict sense even though it is a stratified society. The strata are multiple and confused.

Whether or not it is a fluid society is another question, for movement from one stratum to another might be easy in some dimensions (e.g., religion) and more difficult in others (e.g., culture). The question of *occupational* mobility will concern us and will be taken up in detail later.

Occupational Stratification

Our interest in stratification arises, of course, from our concern with the dynamics of vocational adjustment, from our interest in the relationship between work or occupation and the way of life. It is therefore on *occupational* stratification that we wish to focus, and we have dealt with questions of class and status only in order to show the relationship of work and social status.

The classification of occupations according to prestige, earnings, skill levels, types of skill, education, interests, and intelligence has been attempted by a number of sociologists and psychologists. Some of these classifications will be discussed in the next chapter in connection with types of work. *The Socio-Economic Scale of Occupations* developed by Edwards (98), usually referred to as the Edwards Scale, is a widely used system for classifying occupations according to socioeconomic status, and will here serve as an illustration of the application of stratification concepts to occupations.

Occupations listed in the U.S. Census were classified by Edwards in six major categories:

1. Professional
2. Proprietary and managerial
3. Clerical and sales

4. Skilled and supervisory
5. Semi-skilled
6. Unskilled

When the average number of years of education and the average income of the workers in these six categories were computed, using data obtained in the 1940 Census, Edwards found that his scaling was justified by both of these criteria: the higher the occupational level in his scale, the higher the average education and income (98:175–182). Many other applications of the scale have demonstrated that it is helpful in ordering data, and therefore that the concept of a hierarchy of occupations has some validity.

The use of such occupational scales, however, has also revealed important inadequacies in the concept of one occupational hierarchy. Some executives make more money than other professional persons; in fact, the highest executive salaries are considerably higher than the highest professional salaries (if the field of entertainment is excluded from the professions). Executives tend to have more status in our society than do most professional workers (26: 338) even though they have less education. Among professionals, only the man in the white coat can rival the executive in the gray flannel suit. Skilled workers not only make more money (98) but are also better satisfied with their jobs than are clerical workers (306); yet they rank lower in Edwards' scale because of the emphasis on prestige and education.

Other problems arise when specific occupations within a given category are examined. The professions, in Edwards' scale, include not only the highly esteemed and profitable professions of physician and lawyer, the somewhat less esteemed and much less profitable professions of teacher and minister, and the still less esteemed and less well-paid public welfare worker, but also the highly paid and glamorized profession of actor, the skilled motion picture projectionist who is at about the middle of the prestige scale and somewhat higher in the pay scale, and the semi-professional embalmer and chiropractor, who are placed moderately high on the income scale but low on the prestige scale. These occupations hardly seem to belong at the same level in an overall occupational scale. More refined scales, however, such as that of the *Dictionary of Occupational Titles* (377), have not succeeded in solving this problem.

We have seen that although college professors have more independence and education than executives, they have less pay and less prestige in American society, and that similar inequalities in occupational status exist for other vocations, making scales such as Edwards' relatively crude approximations. A study of these occupational inequalities and inadequacies in the scaling led Hatt (139) to suggest that the classification of occupations must be done

by occupational families if it is to have meaning, for only then can a clear status system be established. An illustration will help clarify this point.

At an alumni reunion each member of the class takes a minute or two to tell about himself. Many are interested in comparing their own achievements in life with those of their classmates. There is an emphasis on marital status, number and ages of children, place of residence, and occupation. It develops that most of those present are in business: a Wall Street lawyer, two brokers, an accountant, two engineers, etc. These men are readily placed by those present, for the job titles and the companies mean something to the business men who constitute most of the group. Two alumni are physicians, also readily placed despite the fact that they belong to another field, for their profession is well known and the names of their medical schools convey something.

Two other members of the class are employed in the field of social welfare, one as clinical psychologist in a child welfare agency in a medium-sized city, the other as a research worker in the headquarters of a national social work organization. How does their success compare with that of the others in the class? The business men feel unable to make such a judgment: professional men are different. One of the social workers discovers that he lives in the same upper middle class suburb as the lawyer. If he follows up the alumni affair with an attempt to see something of the lawyer, will he appear to be "climbing," taking advantage of an old friendship to gain entry to a social group higher than his own has been? Neither one can easily judge their relative success and status.

The problem is more easily solved in the case of two other occupational deviates in this alumni reunion. One is a teacher in a high school in a small city, the other is superintendent of schools in a wealthy metropolitan suburb. The business men can place the superintendent at once, for they can classify him as the executive head of a large organization. He is a success, an executive, at the top of the ladder in his field of work. The teacher, by comparison, can be placed as less "successful" than the superintendent, even though he may be an excellent, well-paid teacher. He knows that any attempt to see more of the superintendent, to renew the friendship of school days, may look like an attempt at occupational and social advancement. But how does the teacher's status compare with that of the engineer or the accountant? Again, he has no way of knowing. The occupations belong in different fields and cannot be compared.

Because of the sociologists' interest in status, esteem, or prestige, Hatt developed a classification of occupations by families. Within this type of classification, the kind of stratification which could not be done consistently

for occupations as a whole could be accomplished. The following occupational families were isolated: Political, Professional, Business, Recreation and Aesthetics, Agriculture, Manual, and Military.

This system was found to simplify the stratification of occupations or their classification by strata. The business occupations can, we have seen, be compared reasonably well with each other, as can the professional. In the political family, the Senator knows where he stands in relation to the Congressman, the Supreme Court Justice, and the State Senator, and so does the rest of the world. The private knows his place vis-à-vis the sergeant, the major, and the general. When status or strata are defined in terms of superiority-inferiority within an occupational field, occupational hierarchies are found which are much clearer than those which result from attempting to put all occupations into one hierarchy.

The workability of this type of stratification is, then, greatly in its favor for certain research purposes. But one may ask whether this demonstrates, as many sociologists seem to believe (e.g., 221:572 and 578), the general advisability of defining status in terms of superiority-inferiority and the need to deal with occupational stratification within families rather than between families.

The superiority of any method over another depends upon purpose. The best mode of travel from New York to Los Angeles may be by commercial airliner, if the purpose is to get there quickly. But if the objective is to see the United States en route, going by private car is a better method of travel. The dimension along which comparisons are made may sometimes appropriately be superiority-inferiority in the sense of taking orders and deference, but the purpose of the investigation may make it desirable to use instead the dimension of wealth or income, general prestige, education or ability, or style of living. The important consideration is the recognition of the fact that none of these is pure, that they are not mutually exclusive or nonoverlapping, and that none of them is all-inclusive and sufficient. It would be convenient if society were so simple that phenomena could be explained on the basis of one factor or studied in terms of one dimension only. The complexity of society makes it necessary to deal with many factors, in many dimensions, as well as to recognize what these factors or dimensions are.

Hatt's analysis of occupational stratification in terms of superiority-inferiority, and his application of this method to occupational families, has brought into focus more clearly than ever certain aspects of occupational mobility. Other studies have shown that there is more *horizontal* than *vertical* mobility, that is, more movement within occupational levels when

defined as in the Edwards' scale than between levels (78; 217: 675–676). Hatt's analysis brings out the fact that movement tends to be within occupational families as he has classified them, whether this movement is vertical or horizontal. That is, people who are in business tend to move, if they move at all, to other positions in the business field; manual workers move to other manual jobs of higher, similar, or lesser status in the manual family; military men climb the ladder of promotion, or shift from one type of duty to another, within the framework of military careers. Shifts from profession to business, from business to recreational, or from recreational to political, families are rare, as are other interfamily movements.

Occupation and Social Mobility

In our work-oriented society with occupation the principal determinant of social status, it is only natural that occupations are the common means of social mobility. Men and working or career women improve their social status primarily by improving their occupations, and other changes made in the way of life are embellishments of the occupation rather than independent of it. For example, the semi-skilled worker moves up in the manual occupation family by learning the work of a machinist while working as a machinist's helper; having attained the higher occupational level, he then moves from the small apartment in which he has lived into a small home which he begins to buy with his weekly paycheck. The junior executive who is promoted from a subordinate supervisory position to a middle management job moves from the neighborhood of struggling young couples and middle class families into a somewhat more expensive suburb, joins a club which he feels is now appropriate to his status, and entertains people who will help develop his new status rather than people who, as formerly in his subordinate job, were simply the most congenial of those persons with whom he happened to be associated. Movement up or down the socioeconomic ladder takes place as workers move up or down the occupational ladder.

It is only occasionally that a change in social status brings about a change in occupation. When this does happen it is because education opens the way to both social and occupational changes. This is well illustrated by the son of a semi-skilled worker who goes to college, acquires the social graces of the middle class, and at the same time gets the training necessary for admission to a profession such as teaching. In these instances educational mobility brings about occupational and social mobility.

In all occupations except the professions and the skilled trades, mobility has been primarily a matter of advancement *in the occupation,* aided to

varying degrees by job-related activities. But in the case of the professions and certain technical occupations and trades, *education* is the intermediate means of occupational mobility. Entry can be obtained only through formal education. When obtaining the formal education is made difficult, this avenue of upward mobility is virtually closed; when obtaining formal education is made easy, upward mobility is facilitated.

The son of the semi-skilled worker just mentioned was upwardly mobile because he lived near a state teachers' college, could get part-time work to help with living expenses at home, and could easily gain admission to the inexpensive training for the underpaid and understaffed profession of teaching. Presumably because of the large number of training centers and the low pay, teaching, the ministry, and nursing are the poor man's (or woman's) professions *par excellence:* movement upward into them is easy and common; so also are entertainment and politics in which training is not formalized and personal rather than educational skills are important. Some who so move remain at their new higher socioeconomic level either as workers or through marriage with teachers, physicians, or other middle and upper class persons whom they meet in their work. Others return to their original parental socioeconomic level through marrying high school or neighborhood friends with similar origins who have not been mobile.

While education for the poorly paid professions such as teaching and the ministry is as available as ever to the financially handicapped student, it has been shown by West (in 26:469) that education for the highly paid professions of medicine, dentistry, and law is less and less open to them. Adams confirmed this (2) for the recent decades, but indicates that this may be a temporary reversal of the long-term (1900–1950) trend toward greater diversification of the social origins of physicians. In other words, some of the roads to occupational mobility show some signs of becoming blocked. In business and industry Adams (3) and Warner and Abegglen (350) have shown that the top positions are *more* equitably distributed than they were a generation ago. Chinoy's *general* conclusion (67) is that the degree of mobility is about the same, while the routes and means of mobility have changed.

Occupation and Class Feelings

Occupation is a principal determinant of class consciousness. In Centers' opinion polling study (63) each interviewee was asked to classify a list of occupations according to whether they were upper, middle, or lower (working) class occupations. There was a high degree of agreement as to the class placement of these representative occupations. Then respond-

ents were asked in which class they themselves belonged. Most big business men considered themselves upper or middle class (91%), most professional men classified themselves in the same way (85%), but most skilled, semi-skilled, and unskilled workers called themselves members of the working class (71, 83, and 75%). Big business men are more likely than others to consider that they belong in the upper class (13% compared to 4% of the professional men), the unskilled are more likely than others to call themselves lower class (7% as compared to 1% of other manual workers), and skilled workers are somewhat more inclined than other manual workers to claim middle class status (26% as opposed to 14 and 18 of the others).

WORK MOLDS VALUES AND ATTITUDES

In the social sciences, cause is often also effect and effect is often also cause. This is especially true of occupation and social status, as we have just seen; it is also true of occupation and values or attitudes. People with certain attitudes are more likely to be attracted to certain types of work than to others; those who have certain values are likely to see more opportunity to achieve them in some fields of work than in others. It seems self-evident that the person interested primarily in the welfare of his fellowmen is more likely to find outlets for these values in social work than in selling bonds (76:191).

But what of the effect of occupation on the attitudes and values of the worker, once he is engaged in it? These are not inconsiderable, for although there has until recently been little in the way of objective evidence (55: Ch. 6), there is ample observational and case material to show that those engaged in an occupation tend either to adapt to it or to shift to more congenial types of work. Recent studies of occupations as social roles (156) have shown that the role expectations that constitute an occupation result in the development of characteristic and sometimes conflicting values and attitudes in members of certain occupations; chiropractors come to view themselves as members of an oppressed minority (348), lawyers as public figures and pillars of the community (349), physicians either as members of a highly organized guild or as participants in an independent commercial venture and less often as helpers of persons (135), and insurance salesmen are torn between aggressive business and sympathetic, friendly roles and values (362). Becker and Carper (21) have described the development of identification with occupations in graduate students. Although their evidence is not at all clear, they report finding that occupational personalities develop as a result of interest in the problems of work, pride in skills, investment, internalization of motives, and sponsorship by professors.

Physical Conditions of Work

Hospitals, insurance companies, and banks are workplaces which are typically exceedingly neat, orderly, and organized. Everything has a place and must be in its place; people walk, talk, and work quietly. There is no horseplay, no rough language, no dirt, no dust, no noise. Contrast these condititions with those which prevail on a construction job or in a mine. Here there is disorder and apparent disorganization. Machines, materials, and waste seem to interfere with each other; people move at varying paces and occasionally run; loud voices shout to be heard above the clatter of machines or the crash of materials, dust, and noise. There may be occasional horseplay and much rough talk.

Many persons who would find one of the first work settings congenial would never consider working in the second type, and vice versa. But most of those who, for one reason or another, take a job in one of these extreme types of settings and keep it, in due course take on some of the characteristics of their work. The construction worker or miner comes to think of roughness of environment and manner as normal, while the bank clerk comes to see quiet order and manners as proper, even though they may both have started with similar attitudes and expectancies. Such adaptations are necessary for the protection of the integrity of the person: if he cannot change an uncongenial environment, he tends to internalize it, that is, make it a part of himself; only rarely does he build psychological barriers to isolate himself from it.

The Social Climate of Work

What has been said of physical conditions can also be said of the social climate in which the work is done. Every worker is a member of a group, and as a group member feels some degree of need to be accepted by, and hence to like, the group. The desire to be a part of things makes him seek to take the expected role, take on the dominant values of work environment, or seek other employment. It is the exceptional person who remains in the field as a deviant, unassimilated, element.

While there are variations within occupations and establishments of a given type, and generalizations are dangerous, the formality of work settings varies consistently. The typical college dean is, to his fellow professors, just another professor, someone who is easily approached despite his administrative responsibilities. The gap between faculty and staff, while genuine, is not visible. Worker-supervisor relations in a college are generally informal and democratic (361: Ch. 4). This is much less true of another type of establishment in which professional workers are associated, namely hospitals, for there

physicians typically rule in an authoritarian way and nurses are subservient and take orders. In business, although sales managers and salesmen may eat lunch together in a friendly and informal way, section chiefs in some organizations such as large insurance companies eat in cafeterias separate from those used by their clerical staffs, department heads lunch in greater style in dining rooms reserved for their use, and top management has special service in a private room.

The style of clothing worn at work often reflects the formality or informality of the type of establishment. In the downtown business office clerk and executive alike seem to feel compelled to wear "business suits," and the more pressure there is on the worker to move upward on the occupational ladder the better dressed he must be to earn the promotion (provided, however, that he must not be so lacking in taste as to overdress). In the school or college in the same city, however, faculty members wear sports coats and flannels, baggy business suits, or even odd coats and trousers, with no thought of being inappropriately dressed. Berets and beards may even be acceptable. Unlike the business men, they do not have to demonstrate their success by dressing competitively in line with current styles, for their success is judged by noneconomic criteria.

Competitive dressing is not the only way in which the formality of some work situations reveals competitive attitudes. They are revealed in production records, competitive entertainment, and remarks made with the intent of building up the self or tearing down another. Such competitive attitudes are widespread in our culture, and are not limited to any one type of work, but they are more common in the highly competitive fields such as entertainment, advertising, merchandising, selling, and finance than they are in education, social work, or agriculture. It would indeed be surprising were those engaged in such work not to develop more competitive attitudes, while those engaged in more permissive types of work did not become more accepting in theirs.

WORK ROUTINES AND THE STYLE OF LIVING

The way in which the work of each occupation is conducted regulates the daily and seasonal routines of the worker, and sets a pattern of social behavior to which he must conform. While it is true that some persons are able to fix their own routines, or to behave socially in ways which suit themselves regardless of the mores, the above generalization is still sound.

The Daily Schedule

The hours of arriving at work in the morning—and therefore of arising and eating breakfast—of lunching, and of departing from

work in the evening—and therefore eating dinner, engaging in recreation, and retiring—vary with the type of work setting and with the occupational status of the worker. The factory operative rises early, if on the day shift, gets to work early, leaves for home early, eats dinner early, plays ball or works in the yard while it is still light, and retires early. The executive, however, rises later, arrives at work later, eats lunch later—his restaurants tend to be crowded at one rather than at noon when the clerks' eating places are full—leaves the office later, eats dinner later, does not play outdoors after dinner on weekdays but engages in indoor work or recreation after dark, and retires later than the operatives or even the clerical workers in his establishment.

The occupation may determine the type of recreation engaged in and the people with whom it is pursued (199:243–244). Thus the group worker works while others play, and may seek less social and less active types of recreation than those which he directs. The financier or broker belongs to the country club and plays golf on week ends, because he thus associates with other persons with whom informal contacts may be helpful in his promotional work. The factory worker lives in a more congested area (92), has less capital to invest in recreation, and depends more on the less expensive forms of commercial recreation such as bowling and pool or the less active commercial entertainment provided in his home by television and the pulps (69).

Family life is regulated by the occupation. The manual worker gets home in time to see his children in the late afternoon and at dinner, and rarely needs to leave home in the evening. Family, social, recreational, and work activity is therefore easily engaged in, if the mores of the subculture encourage these. The professional man generally arrives home only in time for dinner, frequently has meetings to attend or a briefcase full of documents to work on in the evening, and may get to share activities with his wife and children virtually only on week ends. He works long hours, in his office and at home, weekdays and week ends, as Charters (66) has shown in a study of professors at Ohio State University, and as Roe (265) found to be true of biologists. The executive has more social engagements than the professional man, and also has a share of evening meetings and homework (49). The office clerk has more time for family life, and indeed studies have shown that it is the middle and lower middle class who have the most complete family lives and attend most to their children and homes (69, 198), for they have the necessary combination of resources, values, and time free from occupational demands.

The Seasonal Schedule

It is not only the daily routines that are affected by the occupation in which one engages, but also the seasonal schedule. Resort hotel workers (managers, cooks, desk clerks, entertainers) may spend their summers in the Catskills and their winters at Miami Beach; school teachers are on the job from September until the end of June, and use their summers as camp directors, construction workers, students, tourists, or delivery truck drivers; men who work on the ore boats of the Great Lakes during the summer are factory operatives or smelter workers during the winter. Not all types of work have such seasonal variations, but many do. The variations may be a source of pleasant variety, or they may create regular periods of hardship and uncertainty, depending on the nature of the occupation and on the versatility and adaptability of the worker.

Social Behavior

Some occupations can be pursued only in certain *localities*. The drama critic must be near Broadway, the mining engineer must be near the mines, the airline pilot must live near a major terminal, and psychologists are found only in large cities or where there are colleges and other institutions. A short time ago there was only one psychiatrist in the state of Mississippi, and there were no ski instructors employed there. The part of the country and even the community in which one lives may be decided by one's occupation.

This is true also of neighborhoods. In Elmtown (151), the upper middle class lives in "the 400" or "Old Residential" areas, the middle class in the "Old Residential" area, the upper lower class "Down by the Mill," in the "Mill Addition," or "Down by the Canal," and the lower lower class "Down by the Canal" or "Below the Canal." The close relationship between social class and occupation in this study makes it clear that occupation is related to neighborhood. While it is true that in a static community like Elmtown both residence and occupation may have been more the result of class than its cause, the relationship is reversed in more dynamic communities such as Chicago, as the Duncans' study (92) suggests. In a developing metropolitan area, for instance Los Angeles, the tendency is for newcomers to select neighborhoods appropriate to their incomes (occupations), convenient to their work (movies to the North, oil to the South), and close to their friends or desired friends (usually work associates or clients).

Friendships, as has just been indicated, are also job and work derived or determined in many instances. Whyte (357) has described the manner in

which corporations often regulate the social life and with it the friendships of business executives. Even when the process is not company-imposed, as in the case of the corporation wife and her executive husband, it is still true that the people a worker gets to know best are those he sees at work, and it is with them that he most readily develops mutual interests and activities. Even when it is the worker's wife who makes a contact and initiates an activity, or when the worker initiates one himself in a nonwork situation, continuation of the acquaintanceship depends to a considerable degree upon its having some relationship to the worker's occupation. It has been shown by Browne (49) that a considerable part of the social life of executives is planned for company benefit and for personal advancement. The salesman wants to develop contacts (his friends must be potentially useful in making sales), the newsman enjoys no one so much as another newsman, the college professor welcomes company who can discuss his own subject or other intellectual matters, and the garment worker likes the man who can talk clothing manufacture with him or share his enthusiasm for the Dodgers.

The relationships between *clothing and language,* on the one hand, and occupation or work establishment on the other, have already been mentioned. Another example may be pertinent: contrast the clothing and language of the parsonage with those of the army. In both cases they are peculiar to the occupation, and determined by it. The parson's affairs do not get "snafu'd"; the soldier wears a "dog tag" but not a "dog collar."

Conduct is also regulated by occupation (55: Ch. 6). This too has been described by Whyte (357) for corporation executives and their wives, and teachers, particularly in small cities and towns, find their conduct regulated by local standards even more than is true of the inhabitants. Playing cards, smoking, dating, are still often forbidden activities for teachers in smaller communities, although the members of the board of education and their wives and adolescent children may do these things themselves. An artistically gifted young man, raised on a farm and operating it at the time, was once asked by a city friend why he did not join him some free day in doing some sketching or water colors, for which purpose the visitor was staying at the farm. The reply indicated another way in which occupation determines conduct: "That's fine for you, since you're from town; but do you think I want my neighbors to call me a nut?" The young farmer felt he could not exercise the artistic talent he had developed in school and keep his status in his occupation.

A better example is supplied by Hollingshead (151), who quotes an Elmtown mother, wife of an upper middle class ("Class II"), self-made business man, whose son had taken a job as a fry-cook in a diner, as saying: "My

friends are ashamed to have their daughters go with a cook. I can see what's in the future but Mr. Freeman can't." The boy's clique relations did indeed change within a month after he had started working, from the group of middle class boys he had belonged to for years to a new clique composed of working class boys ("Class IV") who worked at the diner and a middle class boy who delivered milk. His dating changed from the middle class girls with whom he had formerly gone to a mixed group that included some middle class but more lower class girls, some of whom were out of school. He acquired an old car and started picking up girls in a nearby town.

There is some reason for thinking that, in addition to the effect that work thus has in determining the social status of friends and recreational activities, it also has effects on the nature of the leisure activities. The work and leisure of business and professional men are more closely intertwined than are those of factory workers and office clerks (69, 349). Those engaged in the higher levels of work spend more time in artistic, intellectual, and community activities, while those at the lower levels spend more time in sports and games and with their children. At the same level, lawyers appear to spend more time in community activities than physicians or executives, executives spend more time in entertaining than physicians (49, 135, 349).

Leadership roles are also determined in part by occupation which fixes status, controls the flexibility of schedule, and limits the funds necessary for participation in community affairs, in clubs, and in other social, political, and welfare activities. Executives and professional men occupy far more leadership positions in their communities than do semi-skilled workers, and clerical workers, salesmen, and skilled workers occupy intermediate positions far down the scale from the higher occupational groups (198, 258). The manager of the large local department store serves as chairman of the Cancer Fund Drive, and his wife functions as a member of the board of trustees of the family welfare society. Skilled and semi-skilled workers are more likely to find outlets in various lodges and athletic societies.

SUMMARY

Work and occupation play an important part in determining the social status, values, attitudes, and style of living of an individual. Important though some of these are as determinants of occupation, they in turn are in part determined by occupation. Occupation is not merely a means of earning a *livelihood,* but also a *way of life,* a *social role* (339, 348).

3

THE VARIETIES OF WORK

More than 22,000 different jobs are defined in the *Dictionary of Occupational Titles* developed by the United States Employment Service (377). The world of work is, clearly, "full of a number of things." To understand it requires accumulating, organizing, and digesting a vast amount of specific information. This is a task which the young student about to enter the labor market, and even the counselor who constantly works with occupational information, cannot possibly hope to accomplish himself. The information must be reduced to more manageable dimensions. It is for this reason that a variety of systems of classifying occupations has been developed (14, 103). These systems will be useful in this chapter as a part of our study of the nature of work. After a survey of methods of classifying occupations designed to introduce the reader to the professional literature and to ascertain the major dimensions of work, the main varieties of occupations or the structure of the occupational world will be examined.

SOCIOECONOMIC CLASSIFICATIONS

One general type of occupational classification has already been discussed in Chapter 2, in which the question of social stratification led us to survey methods of classifying occupations according to social status. We have seen that the concept of social status itself is complex, and that the various dimensions of prestige, earnings, skill levels, and superiority-inferiority relationships, while substantially intercorrelated, are not identical. The socioeconomic classification developed by Edwards (98) simply accepts the weaknesses which result from this complexity, misplacing some individuals in each type of work in order correctly to place the majority. Hatt (139) resolved this problem by developing a scale based on occupational families, aiming to classify more accurately within limited fields but thus sacrificing ability to compare any one occupation with any other.

In an attempt to place individuals within a given occupation more accurately, while retaining the advantages of being able to compare any one person with every other person, Warner and associates (353) developed still another system for the socioeconomic classification of occupations. While their Index of Status Characteristics is a composite of four indices, one of

these more specific scales is based on occupation. The ISC is composed of measures of occupation, home, neighborhood, and source of income. Scales were developed for classifying each of these according to status. Thus, houses are rated according to size, grounds, and maintenance, neighborhoods according to type of dwellings and grounds, incomes by source (interest from investments ranks highest, fees next, then salaries, and finally wages). Occupations are rated on a seven-point scale similar in some respects to Edwards', but different in that levels in a given occupation are recognized and taken into account. Thus, proprietors of retail stores are placed partly according to the size of their establishments, and physicians may be in any one of three classes depending upon the location and nature of their practices. It is worth noting that whereas Warner's notions of class have been much discussed and criticized (180:224–256), the merits or demerits of his socioeconomic classification of occupations have generally escaped notice; even Caplow's otherwise excellent discussion of the measurement of occupational status (55: Ch. 2) fails to mention it.

Caplow points out that socioeconomic classifications of occupations are based on five widely held assumptions (55:42) which, he might have added, are characteristic of our culture but not of all cultures. Analyzing these, he finds a common factor which he believes to be the basis of socioeconomic or of prestige scales. The five assumptions underlying these scales and prestige attitudes in Western culture are, according to Caplow, that

1. White collar work is superior to manual work.
2. Self-employment is superior to working for others.
3. Clean occupations are superior to dirty occupations.
4. Larger enterprises are superior to smaller enterprises in the business field but not necessarily in farming.
5. Personal service is degrading, hence it is better to work for an enterprise than to do the same work for an individual.

The degree to which these assumptions are held varies, of course, from one subculture to another and even from time to time. It is widely held today, for example, that the premium put upon skilled and semi-skilled factory work during World War II did a good deal to raise blue-denim occupations in the general esteem, although the work of Deeg and Paterson (84) does not substantiate this belief. Among some blue denim workers white collar jobs are sometimes looked down upon, as illustrated by one such mother who was pleased with her older sons' employment in semi-skilled work, but who wanted her youngest son to go to college and get a white collar job, because he was "too puny and ailing for real work." Nevertheless,

Caplow's analysis seems to be generally valid and reflects, if nothing else, the middle class values which tend to dominate our culture.

Underlying the above five assumptions, and best explaining the prestige ranking given to occupations in various studies, Caplow believes (55:55ff.), is the degree of behavior control or freedom of action exercised by the person in an occupation. As he points out, this element is that upon which Hatt based his socioeconomic classification (139). It is the superiority-inferiority relationship. And, since such relationships can manifest themselves only within occupational families or *situses,* as Hatt calls them, we find it necessary to fall back upon a two-dimensional rather than a unidimensional scale, of which more later.

INTELLECTUAL DIFFERENCES

While sociologists have been busy classifying occupations according to status and prestige, psychologists have also been at work attempting to classify them according to more strictly psychological factors, particularly intelligence and interest. The first scale which attempted to rank occupations according to intelligence is that developed by Barr for use in Terman's studies of gifted children (330: 65ff.), but more definitive work was soon done on the basis of analyses of data accumulated with the Army Alpha Test of Intelligence during the World War I testing of recruits (112), and in due course with Army General Classification Test data from World War II (300). While this work resulted in lists of occupations ranked according to the amount of intelligence characterizing the men in an occupation, it did not result directly in any *classification* of occupations. When attempts were made to classify occupations according to the amounts of intelligence required (i.e., characterizing them), the groups were so heterogeneous in intelligence as well as in other important characteristics that they were found to be of minimal value. For example, while it may be helpful to know that engineering, accounting, law, and teaching are all occupations in which men of superior mental ability are found, the range of mental ability in these occupations is so great, and they are so different from each other in other respects that other classifications based on other dimensions are needed.

This same criticism can, of course, be made of the prestige scales developed by sociological researchers which, incidentally, correlate very highly with the intelligence scales (54, 59). According to Caplow's data (55:54), bankers, college professors, physicians, and civil engineers exercise the same degree of behavior control. But similarity in this respect does not mean similarity in other important respects. While it is true that they are characterized by the same level or degree of general intelligence, most persons

would agree that they differ in other ways. Caplow's data suggest differences in authority and in class attributes, and differences in income are well established. Furthermore, there are differences in the content and in the nature of their work activities which are perhaps even more significant.

TYPE OF ROLE AND ACTIVITY

Considerable light has been thrown on these other types of differences by the work of psychologists who have studied the interests and personality characteristics which characterize men in various occupations and thus serve to describe the typical roles and activities of these occupations. Fine (102) has described an important project of this type.

Interests. That occupations can be classified on the basis of interests which characterize the men employed in them was first demonstrated by E. K. Strong, Jr. and has been further documented in numerous studies summarized by Strong (303) and by Super (313: Ch. 16–18). Administering an inventory consisting of 400 occupational titles, school subjects, leisure-time activities, and peculiarities of people to men in a given occupation (e.g., engineering), Strong compared their responses of liking and disliking each of these with the responses made by men in general, assigned weights to each question based on the degree to which men in the occupation being studied differed from men in general in their answers, and scored the inventories with the weighted scoring keys thus developed. With new groups of subjects these empirically devised scoring keys were able to differentiate men in one occupation from men in other occupations, particularly when those in the other occupations were in unrelated fields. Studies of the intercorrelations of the occupational keys for Strong's inventory showed that occupations could be grouped according to families, and that names could be assigned to these families on the basis of the interests which characterized the men in them and on the basis of the activities in which they were engaged.

The classification of occupations on the basis of interests which Strong thus developed is as follows, omitting occupations which do not fit into existing groups:

1. Biological science occupations
2. Physical science occupations
3. Subprofessional technical occupations
4. Social welfare occupations
5. Business detail occupations
6. Business contact occupations
7. Literary-legal occupations

This classification is, as stated above, strictly empirical. Empiricism has

the defect of limiting a system to the data which happen to have been put into the system. Thus, artistic occupations are represented by only two scoring scales in Strong's research, one for "artist" and one for "architect." The intercorrelations of these two scales happen to be above .60 with the scales for the biological science occupations and below this with the scales for physical science occupations. Hence they are placed with the physicians', osteopaths', dentists', and psychologists' scales in the biological sciences family. But there is reason for thinking that had there been more scales for artistic occupations they would have emerged as a distinct interest group or family. Similarly, the occupations of farmer, aviator, carpenter, and mathematics-science teacher find themselves in the same family although, as Strong points out, this group of occupations (the subprofessional technical) might well subdivide if more scales were included in the analysis or were other reference groups used.

Accordingly, the writer has drawn on research by Allport and Vernon, Thurstone, Kuder, and others in order to construct a list of occupational families which is empirically derived but logically satisfying (313:381). It is reproduced herewith.

1. Scientific
2. Social welfare
3. Literary
4. Material
5. Systematic (clerical)
6. Contact
7. Artistic
8. Musical

Personality. Another approach to the classification of occupations by content or activities is represented by studies of the personalities of workers engaged in an occupation, the implication being that the occupation attracts individuals with certain personality traits or molds them according to its requirements once the worker is identified with the occupation. Most such studies have not so far yielded positive results (313: Ch. 19). This may be because the instruments used are not valid, or it may be due to the fact that each occupation provides outlets for such a variety of personality traits as to make impossible occupational classification on a personality basis. The problem may, however, lie in too coarse a grouping of occupational specialties in the studies in question. For example, the study by Kaback (172) grouped accountants in one occupation and pharmacists in another, whereas a later study by Schwebel (281) demonstrated that pharmacists can be divided into at least two subgroups, retail business managers on the one hand and laboratory workers on the other. These two subgroups have quite different interests, and may have differing personality characteristics which were lost sight of in Kaback's mixed group of pharmacists in general.

That occupational personalities may exist is, moreover, suggested by the work of Roe (263, 264, 265, 266), in which natural and social scientists were found to differ in certain personality characteristics, and in which, furthermore, research workers were found to differ from persons in the same occupation who had not established themselves as research workers. If, in due course, occupations can indeed be characterized on the basis of personality traits, then eventually it may be possible to classify them according to personality dimensions. In the meantime, the interest dimensions are the most useful means of classifying occupations according to role or activity.

TYPES OF ENTERPRISE OR LOCATION OF WORK

A final unidimensional approach to the classification of work has been that based upon the location of the work, the kind of industry or enterprise in which the worker earns his living. The focus here is not so much on the worker, but on the general nature of the setting in which he works, on the enterprise in which he and his co-workers, no matter what their occupations, are jointly engaged. Such classifications have been developed largely for commercial use, and are of more interest to economists and to business men than they are to counselors and psychologists, but they are important to anyone who seeks a picture of the world of work. They tell where the people in various occupations earn their livings, and what collective goals they seek to accomplish in the process of earning a living.

Industry. One of the most widely used classifications of this type is the Standard Industrial Classification prepared by the U.S. Bureau of the Budget (375). In it, industries are classified by type in order to assist in the uniform reporting of economic data by a variety of government and private agencies. The code consists of nine major divisions, which are in turn divided into 91 major groups, subdivided into 519 groups of closely related industries, and further subdivided into 1,530 industries. The nine major categories are:

1. Agriculture, forestry, fisheries
2. Mining
3. Construction
4. Manufacturing
5. Wholesale and retail trade
6. Finance, insurance, and real estate
7. Transportation and communication
8. Services
9. Government

The Manufacturing Division, for example, includes such major groups as Food and Kindred Products, Tobacco, Textiles, Apparel and Other Finished Products Made From Fabrics, Lumber and Timber Basic Products, Furniture

and Finished Lumber Products, etc. The Services Division includes, among other things, Hotels, Rooming Houses, Camps, and Other Lodging Places, Personal Services, Domestic Service, Business Services, Automobile Repair Services and Garages, etc.

To break one of these major groups down, for example, the Business Services field includes establishments which provide services to business organizations, such as employment services, news services, advertising, and credit and collections.

Obviously, the study of the Standard Industrial Classification, of the activities of each type of enterprise, and of the numbers of workers employed in these enterprises, can give one a comprehensive and helpful picture of one aspect of what work is. It provides a bird's-eye view of the industrial structure in which workers with all kinds of training, engaging in all kinds of activities, and with various degrees of prestige, find employment. Reference is made to the second chapter in Baer and Roeber (14) for a survey based on this material.

It is interesting that the "situs" or family classification developed by Hatt, in order to make possible a valid prestige classification (139, and the preceding chapter), bears considerable resemblance to this industrial classification. Hatt's classification was as follows:

1. Political
2. Professional
3. Business
4. Recreation and Aesthetics
5. Agriculture
6. Manual Work
7. Military
8. Service

Agriculture, service, government (political), and business (trade and finance), appear in both lists. Hatt's Recreation category comes under the Service category in the Standard Industrial Clasification, while his Professional category cuts across most of the SIC categories, as well as some of his own (political, business, recreation, agriculture, military, service). And, finally, Hatt's Manual Work category lumps together some of the mining, construction, and manufacturing occupations, but not all. It seems, then, that what Hatt developed was in reality an industrial classification, which is not surprising when one remembers that his objective was to provide a classification of occupations based on superiority-inferiority, defined in terms of who-gives-orders-to-whom. This is of course a matter of the organizational hierarchy, and requires a classification of occupations according to organizations in which they are typically found.

WAYS IN WHICH OCCUPATIONS DIFFER

That occupations differ in the social status which they confer upon people (prestige, income, authority, freedom of action), in the amounts of intelligence they require, in the types of interests which find outlets in them, and in the types of enterprises in which they can be found, has been well established in studies such as those which have been referred to earlier in this chapter. Since there is a substantial tendency for the social and intellectual status of occupations to agree (54, 59), this means that three dimensions have been isolated, by means of which occupations may be classified. These three dimensions may be described as *level, field,* and *enterprise.*

Level. The amount of prestige associated with an occupation, the size of the income typically earned, the degree of authority wielded, the freedom of action involved, the amount of education required, and the amount of intelligence required by a given occupation are all substantially, although by no means perfectly, intercorrelated. Even though the rank orders of some occupations vary considerably, according to which of these characteristics they are being rated on (for example, bankers rank high on income but not high on education), by and large they agree rather well. It is not so much rank order that counts as section of the scale in which placement is made, and there is actually a rather close agreement in the section of the scales on which these criteria place occupations. For most purposes, then, it is possible to think in terms of one vertical dimension along which occupations may be placed. The dimension is vertical in that occupations require more or less of this characteristic and can be ranked above or below each other on this dimension. This composite dimension may therefore be characterized as one of level.

Field. Interests and personality characteristics, such as appear to be required or developed by vocational activities, differ as to degree *within* themselves, but not *among* themselves. One man may be very interested in art, another man very little: in this sense, there is such a thing as level of interest. But to say that artistic interests are superior or inferior to scientific interests would be to make a value judgment with which one could not expect to find widespread agreement. In this sense, then, it is helpful to think of interests as arranging themselves, not vertically according to levels as do prestige and intelligence, but horizontally according to fields. The same may be said of personality traits. Hence the concept of fields and levels in the classification of occupations.

Enterprise. Chemists work in educational institutions, in manufacturing, in agriculture, in government, and in other institutional settings. The same is true of lawyers, of psychologists, of truck drivers, and of clerks. The conditions of work for chemists and clerks vary considerably with the type of enterprise in which they work. For example, a study of the specialties and locations of psychologists in relation to salaries earned (277) showed that salaries vary more with the type of institution or enterprise than with the field of specialization. That is, clinical psychologists and personnel psychologists working in universities earned about the same amounts, on the average, but these same kinds of psychologists, when employed in hospitals, earned considerably less than they did when employed in industry. And it is not just pay that varies with the institutional setting, but also the pace of work, type of supervision, security benefits, social life, etc. Hence it is important to describe occupations in a third dimension, that of the type of enterprise.

Field and Level Classifications. The concept of fields and levels in the classification of occupations is an old one. In the more recent literature on vocational counseling it is discussed by Hahn and McLean (132:194ff.) and by Baer and Roeber (14:535–541), the latter source including a classification of this type for use in guidance.

Classifying occupations according to fields of interest defined by the Kuder Preference Record (Vocational), which in general resemble the fields described in the section on interests, Baer and Roeber also utilize four levels of ability. Thus, in the Scientific Field, the subcategory Biological Work is illustrated by four occupations, one at each ability level: bacteriologist, sanitary technician, drug collector, and agricultural aide. Similarly, in the Persuasive Field, the Buying and Selling subcategory is illustrated by four occupations at the four ability levels: technical salesman, department store buyer, sales clerk, and huckster. It is one of the limitations of McKenzie and Stalker's otherwise well-conceived *Search List* (207) that they do not include, along with their three related vertical dimensions or levels of intelligence, attainments (education) and background support (socioeconomic status), the horizontal dimension of field of interest.

The Dictionary of Occupational Titles (377) incorporates what is perhaps the best-known field and level classification of occupations. This dictionary, published first in 1940 and in revised form in 1949, consists of two parts which are relevant here. Part II is a list of adult jobs, classified and defined; Part IV is a similar classification of entry jobs, that is, of jobs open to beginning workers without previous experience. The classifications differ at the

low end of the scale because of the fact that beginning workers cannot be classified on a skill basis. But the two classifications are otherwise essentially the same.

In the *Dictionary,* Shartle has pointed out (285:124–125), this classification is based upon two dimensions. He has actually listed three: skill level, type of activity, and type of enterprise. It is neither a true two-dimensional classification nor a true three-dimensional system. In fact, it is not even a true unidimensional scheme for, as Table 2 shows, some of the categories in the broad grouping are skill, others are activity, still others are enterprise categories.

TABLE 2. DOT OCCUPATIONAL CATEGORIES BY TYPE

Category	Type
Professional and managerial occupations	Activity
Clerical and sales occupations	Activity
Service occupations	Activity
Agricultural, fishery, forestry occupations	Enterprise
Skilled occupations	Level
Semi-skilled occupations	Level
Unskilled occupations	Level

Within the categories listed in Table 2 are subcategories which are in turn sometimes based on distinctions of activity, sometimes of enterprise, and sometimes of skill level. For example, the Professional and Managerial category is divided into Professional, Semiprofessional, and Managerial and Official groups. The first two are differentiated on the basis of level, as the definitions make clear, while the last group is differentiated on the basis of activity or function. The Clerical and Sales category is subdivided into Clerical and Sales, that is, activity categories. The Service category is broken down into Domestic, Personal, Protective, and Building groups, the first, second, and last of which are primarily based on enterprise or location—and to a lesser extent on activity—while the third is based on both location and activity. The Agricultural category is broken down on the basis of the types of enterprises named. And the three skill levels are subdivided on the basis of enterprise (manufacturing, nonmanufacturing, and public service), partly on the basis of function (foremen) and partly on the basis of skill (apprentices). Similar criticisms hold for the Entry Occupational Classification.

Logical purity is not, in and of itself, the most important criterion by

which to judge a classificatory system. The DOT system was constructed as the most comprehensive and most workable classification of occupations that could be devised at that time by those responsible for the work. The DOT has proved to be a useful tool for organizing and making a vast fund of information useful to vocational counselors, manpower specialists, placement officers, and entrants into the labor market. But when logic is defective other defects are likely to be discovered.

One such defect came to light, not in the practical use of the DOT classification, but in an attempt to put it to research use. In studying the consistency of the occupational preferences of the boys in the Career Pattern Study (321) it was desired to ascertain just how consistent those preferences were. Consistency could be studied as consistency of field or level, or of field and level combined. The last seemed preferable, for a boy might at one time say he wants to be an engineer, and at a later date say he wants to be a mechanic: he is consistent as to field (both are technical), but inconsistent as to level (one is professional and the other is skilled). The only way truly to represent his consistency or lack of it is to take both field and level into account. It was planned to assign a score of one for each step of discrepancy, whether of level (scores could range from 0 to 5 on a 6-point scale) or of field (scores could be 0 to 1 since there is no question of degree but only one of identity or nonidentity). When this system was applied to the DOT classification it proved unworkable for, as seen above, differences in code numbers are sometimes primarily differences of field and secondarily differences of level, sometimes they are the reverse, and sometimes they are differences of type of enterprise, that is, of a third dimension. For this reason, the two-dimensional classification developed by Roe (267) was tried out, and, with modifications introduced by Moser, Dubin, and Shelsky (224), it proved workable.

The Roe Classification. Roe developed her classification of occupations "as an aid to the psychological understandings and interpretation of the role of the occupation in the life of the individual . . . of the relations between occupational choice and personality" (267). She did not intend it to be useful in counseling in the same way as the *Minnesota Occupational Rating Scales* (244), nor in census classification or occupational description. The Career Pattern Study use of it suggests, however, that it may be useful for this last purpose.

The classification is one of level and field. The level classification is, as in most cases, a composite of responsibility, skill, intelligence, education, and prestige: in Roe's article it consists of eight levels, but Moser, Dubin and

Shelsky reduced them to six, with two levels subdivided to make a distinction between the transmission and the application of knowledge. These had been treated as separate levels in Roe's first publication, but the distinction proved to be one of kind rather than of level, hence she incorporated this change in her later text (268). The six levels are:

1. Professional and managerial (higher)
2. Professional and managerial (regular)
3. Semi-professional and low managerial
4. Skilled support and maintenance
5. Semi-skilled support and maintenance
6. Unskilled support and maintenance

The fields are called foci of activity and resemble the interest fields isolated in the work of Strong and others. They follow, as developed originally by Roe and as modified for the Career Pattern Study by Moser, Dubin and Shelsky (224).

Roe's Original Fields

1. Physical
2. Social and personal service
3. Persuasive business
4. Government, industry
5. Mathematics, physical science
6. Biological science
7. Humanities
8. Arts

Moser, Dubin and Shelsky: Fields and Enterprises

1. Service
2. Business contact
3. Business administration and control
4. Technology
5. Outdoor
6. Sciences
7. Cultural
8. Arts and entertainment

Roe's field and level classification seems the most logical and practically useful two-dimensinonal classification available. However, her modified field dimension has become a mixed field and enterprise classification, as Moser, Dubin, and Shelsky point out, without clearly indicating when one is stressed, when the other. Its use in describing the varieties of work will be demonstrated in closing this chapter, but one radical modification will be introduced: Roe's original *field* dimension will be retained, along with the modified *level* dimension, and a third, *enterprise,* dimension, will be added.

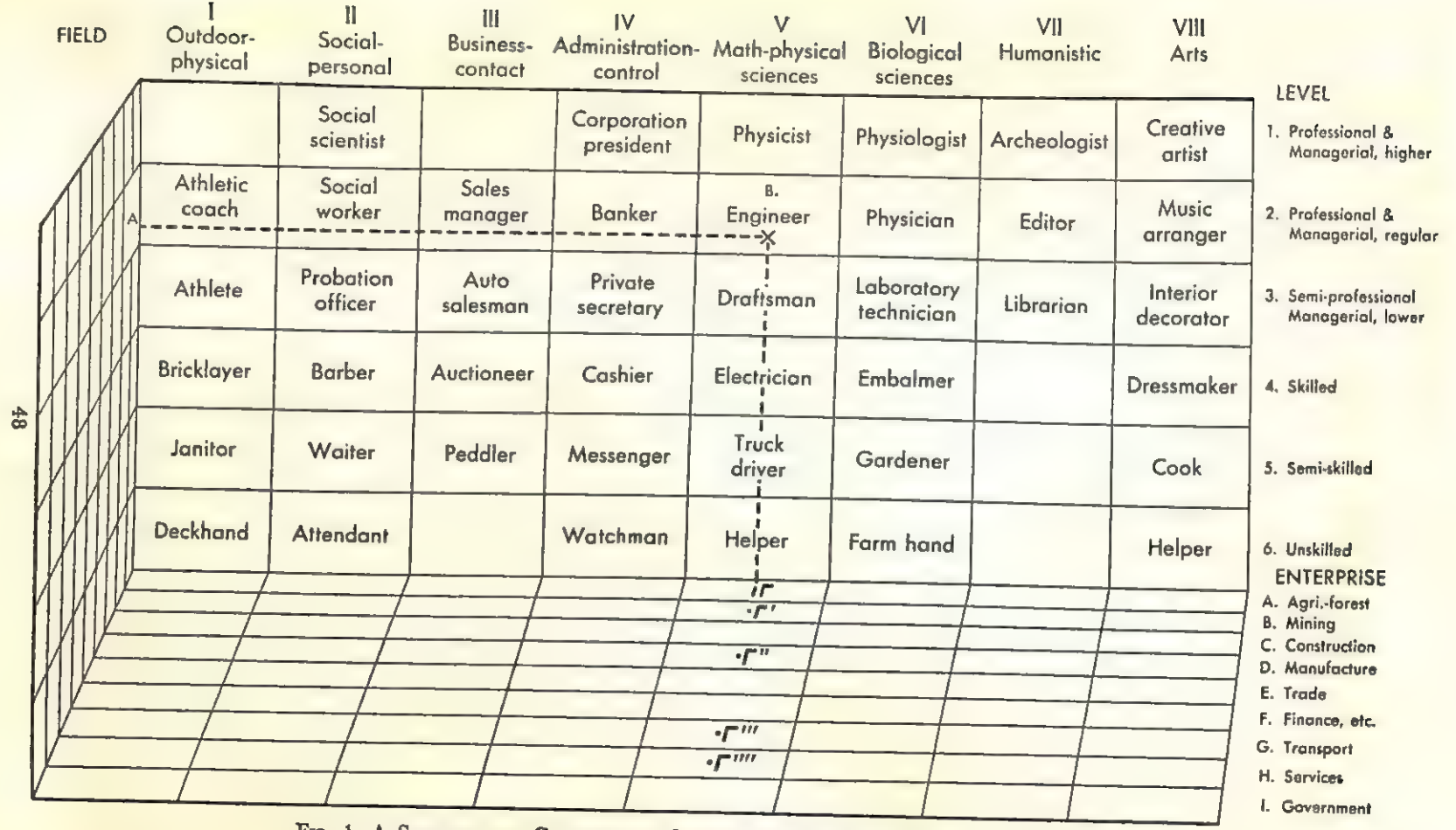

FIG. 1. A SCHEME FOR CLASSIFYING OCCUPATIONS BY LEVEL, FIELD, AND ENTERPRISE

A THREE-DIMENSIONAL CLASSIFICATION OF OCCUPATIONS

We have seen that occupations can be described on three relatively independent dimensions: level, field, and enterprise. Since the most widely used classification (the DOT) is a confused mixture of these three, and the most defensible available classification is only two-dimensional, the task of providing a sound and practical three-dimensional classification remains to be accomplished. It is proposed that this can readily be done by adding the third, enterprise, dimension to the partly modified Roe classification. The enterprise dimension is that supplied by the Standard Industrial Classification discussed earlier. The result of combining the three dimensions is shown in Figure 1.

This figure, being in three dimensions, cannot well be reproduced on paper. As a compromise, illustrative occupations are listed in two dimensions (level and field, the upper half of the diagram). The third dimension is shown in the lower half of the diagram, as the bottom plane of a cube, of which the field dimension is the back plane, and the level dimension is the left-hand plane. To properly locate any given occupation, then, it is necessary to project a perpendicular from each of the three surfaces to a point in the space comprehended by all three surfaces (the occupation). Thus, to locate the occupation "civil engineer employed in conservation work with the National Park Service," it would be necessary to draw a perpendicular line from the point "**A**" at the Professional level on the vertical side plane (to the left of "Athletic coach"), to its intersection with a line projected from "β" at the Mathematical and Physical Science category of the vertical rear plane, both of which intersect a perpendicular line projected from the point "Γ" at the Agriculture, Forestry, and Fisheries category of the horizontal plane. This gives point **X**, near the top rear of the cube and a bit right of center, at which this particular type of work is located in this scheme.

If the work in question were engineering in a mining company, the lines would be projected from **A** on the side plane, from β on the rear plane, and from Γ' on the base plane (mining), intersecting at a point closer to the viewer than **X**, that is, nearer that center of the cube. Similarly, an engineer working in manufacturing would be located above the point Γ'', an engineer employed by the telephone company would be located above the point Γ''', and a consulting engineer would be located above the point Γ''''. Electricians employed in the same situations would be located on the same perpendiculars, since they too are in the Mathematical and Physical Science field, but at a lower level since they fall in the Skilled category on the side

plane. By contrast, physicians working in the same types of enterprises would be represented by symbols appearing at the same levels as those of the engineers, but always to the right because they fall in the Biological Science field.

THE VARIETIES OF WORK IN PROPER PERSPECTIVE

Now that we have surveyed the basic dimensions by means of which occupations may be described, and have found a way of combining them into a classification system which places occupations in their proper relations to each other, we may conclude this chapter by a brief overview of the world of work as revealed by this crystal cube.

Work varies according to the *level* of ability it requires, the amount of education and training necessary, the degree of freedom exercised by the worker, the amount of authority he exercises, the prestige it bestows upon the worker, and the material rewards it yields. These variables are rather highly related to each other, when occupations rather than people are classified, although there are some occupations in which relationships are not exactly as expected. The highest level of work is that of the innovator and free agent, followed by the professional transmitter or applier of knowledge, the semi-professional, the skilled worker, the semi-skilled worker, and the unskilled worker. As examples, we have physicists, engineers, draftsmen, electricians, truck drivers and helpers in the physical science field.

Occupations vary also according to the *field* of activity or interest. Work activities and interests may be classified as physical, social or personal service, persuasive business, administrative and controlling, mathematical and physical sciences, biological sciences, humanistic, and artistic. There are no questions of level in this categorization for, while levels exist within these fields, there are no differences in ability or prestige among most of them. Physicists and physiologists are in different fields, yet at the same level.

Work varies also with the *enterprise* in which it is carried on. The civil engineer who works for the National Park Service on conservation projects has a workplace, associates, and routines quite different from those of the civil engineer who works in a construction company. Their work, again, is quite different from that of the consulting engineer who has his own office, seeks and accepts or rejects contracts according to his needs and tastes, and works or takes time off according to his own judgment of what is wise and convenient. Even clearer is the contrast between the work of the physician employed as chief of professional services in a government hospital with a considerable volume of administrative work, and that of his colleague in

private practice with a secretary to keep his records and medical rather than administrative decisions to make.

SUMMARY

The world of work is complex. Its 22,000 occupations can be reduced only by classifying them according to some system, and no system based on one dimension is adequate. It is important, therefore, that those who would guide the young and the confused through this world understand the major respects in which occupations vary, and use this understanding of the major dimensions of work to classify them in groups which are less confusing than the total array. With this kind of classification in mind, and with some understanding of the person with whom he is dealing, the counselor may then have some notion of where the individual fits into the scheme of things.

4

OCCUPATIONAL LIFE SPANS AND OUTPUT CURVES

Some occupations are typically open to young people recently out of school or college, while others are rarely entered by young men and women. Similarly, certain occupations hold their workers only until they attain adulthood or reach full maturity, and then either lose them or in some instances expel them, while other occupations retain their members until old age. Occupations might thus be said to have life spans, for some are open only during certain stages of the adult's working life.

A related question is that of the age of maximum achievement or productivity in the occupation. It might be expected that occupations which typically admit and keep only young workers would be those in which people are most productive at early ages and in which productivity declines early and rapidly. Conversely those which admit only older people or which retain their members until late maturity might be fields of work in which productivity and leadership can be maintained until late in life.

In this chapter attention will be focused on these questions, in an attempt to develop further an understanding of the nature of occupations and of the world of work.

OCCUPATIONAL LIFE SPANS

The twentieth century has been characterized by a generally increasing age of entry into the world of work. In the United States during World War I the typical soldier had completed eight grades of school. He had therefore entered the labor market and presumably took his first full-time job at age fourteen or fifteen. By World War II, on the other hand, the average American soldier had completed the tenth grade: he had entered the world of work at age sixteen or seventeen. The subsequent development of junior college education and the public and private subsidization of higher education through the programs of veterans' benefits, the National Science Foundation, National Merit Scholarships, and a variety of other means, suggests that in due course the typical American will have completed a high school education and perhaps a year or two of junior college

or post-high school technical training, will enter the labor market at age eighteen or twenty.

Age of Entry

This trend toward an increasingly higher age of entry into occupational life has not, however, obliterated the differences between occupations with regard to age of entry. The age of entry into the occupations which are normally entered only after obtaining more education or attaining greater maturity has gone up also, partly because of the extension of periods of formal preparation.

Business education was at one time a matter of apprenticeship, then a function of the secondary school or post-high school business school. It was then in part taken over by the universities (in so far as the preparation of junior executives was concerned) in undergraduate schools of business administration, and more recently these schools have shifted their emphasis to the graduate level, as at Harvard, Columbia, and a number of other institutions. Similarly, engineering was once learned by apprenticeship, then in four-year engineering colleges, and currently to an increasing extent in five-year programs involving a combination of liberal arts in the first year or two with technical subjects predominant in the last three years. Psychology also has seen such changes, for in the period after World War I many persons with a master's degree were able to enter the field and become established in it, while trends accentuated by World War II made it increasingly important to have the doctorate in order to qualify, even while the time required to earn the degree in some specialties was extended from three to four years of graduate study.

It is typically the occupations requiring the most academic ability, the greatest physical strength, or the highest degrees of emotional maturity and responsibility which are entered somewhat later than others, while it is those which require least academic ability, least strength and endurance, and least ability to assume responsibility which are open to the younger aspirants. Specific instances will be mentioned below, but the reasons for this situation may be worth commenting on. Physical strength and emotional stability are characteristics which develop only with maturity, with the result that employers rule out very young applicants on the assumption that they have not yet developed these characteristics. Jobs requiring considerable mental ability also generally require that the ability be trained, and as training either in school or on the job generally takes several years, qualified applicants are *ipso facto* several years older than other beginning workers.

Age of Retirement

The trend toward later entry into the world of work has been paralleled by one toward earlier retirement from it. The increase in social legislation, rising standards of living, and the greater complexity of business, industrial, and professional activities which have made it possible and necessary to prolong the period of preparation for work have also made it possible and wise to advance the age of retirement for most types of workers. Formerly, the need to earn a livelihood led most persons to work until unable to continue, and even those who could afford to retire tended to do so late. Today, larger numbers of older people are able to retire and do so despite apparent preferences for continuing to work after reaching retirement age. They have been retiring, in fact, at earlier and earlier ages, for whereas retirement at the age of seventy was perhaps the most common age, it has moved down to sixty-five and in some organizations to sixty. There appears now to be something of a reversal of this trend, partly because of better health in old age, partly due to the increasingly large proportion of our adult population in those age brackets, and partly because of the discovery that in many instances early retirement is good neither for the individual nor for society. Instead, more thought is being given to a tapering off of work activities in ways appropriate to the capacities of the older worker, so that society may continue to have the benefit of his knowledge and skills while he continues to have the satisfaction of playing a significant role in society.

Just as there are occupational differences in age of entry, so too there are occupational differences in age of retirement. In many instances it is the occupations which can be entered early in a career which have early retirement ages, and those which are entered late which have a late leaving age. But this is not always true, for the factor causing late entry may cause late leaving or it may cause early retirement. Heavy manual work, for example, is normally entered only after initial work experience at lighter jobs, and is therefore often a "late"-entered occupation, but it is also one which is left fairly early as the work becomes too heavy for an older man. On the other hand the occupations which are entered late because of ability and training requirements are usually occupations from which retirement takes place late in life. This is thanks to the fact that intellectual activity can often continue long after physical strength has waned. Intellectual activity can frequently be engaged in at the will of the older professional worker, rather than being regulated by the work situation itself as in the case of heavy manual work.

The Life Spans of Selected Occupations

Unfortunately, little work has been done on this question of occupational life spans. Most of what we know concerning it is based on observation rather than on systematically collected and analyzed data, although the Bureau of Labor Statistics has made a beginning (378). The majority of vocations can be characterized as normal-entry and normal-retirement occupations, that is, as fields of work which are typically entered neither early nor late in the working life of the individual, and which similarly are left neither unusually early nor unusually late in his working life. There is some evidence that there are other occupations which can be characterized as early-entry, early-leaving occupations, others which might be called early-entry normal-leaving, others which could be classified as early-entry late-leaving, and so on, making a total of nine different categories as in Table 3. But even such terms as "early-entry" and "late-leaving" are novel. Hence some attempt at defining them is called for.

Entry and *leaving* can be defined as early or late only in relation to some norm. One possible norm for entry is the amount of time which elapses between formal education and entering the occupation. But such a definition leads to difficulties because it does not take into account the amount of formal education: it puts high school dropouts and medical school graduates on the same plane, makes physician and messenger both early-entry occupations. Another possible norm is chronological age. This reference point is made more meaningful by explicitly taking into account the concomitants of age, namely, training and experience.

Early entry is then defined as entry immediately after the termination of minimal formal education, normal entry as entry after completion of formal education or brief preliminary work experience, and late entry as entry after extended appropriate training or substantial work experience in some other field. Dropping out of school is the termination of minimal formal education. High school graduation and college graduation are in this scheme both considered the completion of formal education. Apprenticeship and on-the-job training constitute brief preliminary work experience, as does the common sequence of unrelated and blind alley jobs which high school leavers and students typically have before finding the stable work which requires some maturity. Extended appropriate training or work experience includes both graduate professional education such as medicine, and on-the-job experience as locomotive fireman prior to entering the occupation of locomotive engineer; extended "other" work experience is necessarily undefined, as illustrated by the variety of other things which many men do before entering life insurance sales or before being downgraded with age to jobs as watchmen.

Early leaving, in the same frame of reference, involves leaving the occupation while still capable of working in other occupations, and an early-leaving occupation is one the members of which typically leave to enter other fields

TABLE 3. THE LIFE SPANS OF SELECTED OCCUPATIONS (ESTIMATED)

Early-Entry Early-Leaving	Early-Entry Normal-Leaving	Early-Entry Late-Leaving
Usher (theater)	Assembly worker	Gardener
Jumper (truck)	Packer	Domestic
Clerk (dime store)	Wrapper	Elevator Operator?
Bootblack	Clerk (department store)	
Truck driver		
Messenger		
Model		
Army, Navy, Air Force enlistee		
Entertainer		
Athlete		
Normal-Entry Early-Leaving	**Normal-Entry Normal-Leaving**	**Normal-Entry Late-Leaving**
Teacher (Phys. Educ.)	Teacher (elementary or secondary)	Banker?
Airline stewardess	Engineer (graduate)	Broker?
Army, Navy, Air Force officer	Clerk (office)	Investment Counselor?
Pilot (aircraft)?	Accountant	Cobbler
	Bookkeeper	Carpenter
	Stenographer	Tailor (custom)
	Mechanic (auto)	
	Plumber	
	Painter	
	Machinist	
	Fireman (locomotive)	
	Pilot (aircraft)?	
Late-Entry Early-Leaving	**Late-Entry Normal-Leaving**	**Late-Entry Late-Leaving**
	Engineer (locomotive)	Judge
	School superintendent	Politician
	Counselor (high school)	Salesman (life insurance)
	Professor	Wâtchman
	Physician	Bootblack
	Lawyer	Messenger
	Psychologist	Elevator Operator

of work for a substantial number of years. Normal-leaving occupations are those which workers typically leave at the common retirement age, either for full retirement or for the modified employment engaged in by many retired men (see Ch. 11), and a late-leaving occupation is one in which men typically continue to work for some years longer than those in most occupations.

Early-entry Early-leaving Occupations

As this table indicates, observation suggests that the occupations of theater usher, jumper (truck), messenger, dime-store clerk and certain others are illustrations of early-entry early-leaving occupations, for it is to such jobs that boys and girls often go on leaving secondary school. It is such jobs that they are forced to leave after a very few years when their physical, mental, and emotional characteristics and family obligations have developed to a point which permit and compel them to seek other work in which they can earn a more adequate living. It is interesting that some of these same occupations (e.g., bootblack, messenger) appear again as late-entry late-leaving occupations: these are the relatively undemanding, low-paid jobs open to and sought by the young and the old, but avoided by the responsible and able adult with family responsibilities.

Entertainers and professional athletes belong in another group of occupations which can be described as early-entry early-leaving, although somewhat different in character from the first group. More skill and training are involved, so that entry as a regular wage earner is generally possible only somewhat later, and withdrawal from the occupations also generally takes place somewhat later. But both entry and withdrawal tend to be early, for the entertainer's stock in trade is in many cases his or her youth, and athletes reach a point in their late twenties or thirties at which they begin to feel the strain of their work. Although they may continue in the occupation for some time, many leave at this point rather than attempt to adapt their work to their capacities. Bookbinder (41) has thus traced the careers of major league baseball players, measuring their working life spans and analyzing the fields to which they move, showing that they retire from baseball at about the age of forty and enter a great variety of fields, in which they have often begun work on a part-time basis, or developed enterprises, while still in baseball.

Early-entry Normal-leaving Occupations

Certain other occupations which are commonly open to younger workers are assembly worker in factories, packer, wrapper, and department store clerk; unlike those which have so far been discussed, how-

ever, these early-entry occupations are not such that early withdrawal or transfer is necessary. Instead, the worker may continue to work in that capacity for his total working life, subject to the irregularities of employment resulting from business cycles. It is true that some of these vocations do tend to be filled by younger people, but this is because they are entry jobs which are soon vacated by some of the more able and ambitious young people who move on to more responsible positions. They do this, however, not because all young people are forced out by the nature of the work as they mature, but because they use the work as a steppingstone to advancement. Those who are satisfied with the demands and rewards of these entry occupations can and do remain in them until retirement.

Early-entry Late-leaving Occupations

There are other early-entry occupations which may be characterized as late-leaving vocations, because it is possible for the worker to continue to work in that field beyond the usual age of retirement if health permits and if he so desires. Domestic service is a field in which early entry is possible because of the familiarity of much of the work even to the inexperienced worker, and because of the nature of the on-the-job training and supervision. In it the worker is able to continue active long past normal retirement time because of the personal nature of the relationship with the employer and the ease with which the nature and speed of the work activities can be adapted to the capacities of the worker. This is true also of the work of gardeners and chauffeurs, as well as of maids and cooks.

There may be another group of early-entry late-leaving occupations, only one of which is shown in Table 3: elevator operators are an example. Many beginning workers find employment in these occupations at an early age, and many older workers continue to work in them even after normal retirement age has been reached. It is not clear, however, whether this is, in fact, one occupation, for employment policies in some organizations result in the filling of such jobs by younger workers only (in these companies they are therefore early-entry early-leaving jobs), while in many other organizations the policy is to employ older persons in these capacities (in which case these jobs should be classified as late-entry late-leaving). There is no evidence, at present, that the young elevator operators of one concern become the older elevator operators of another, as would be necessary if this is truly an early-entry late-leaving vocation.

Normal-entry Early-leaving Occupations. There are some occupations which, although normally entered after completing a college education or a comparable period of special training, do not remain open to the worker

throughout the normal span of his working life. The teacher of physical education, for example, enters the field directly upon completion of four years of college preparation, but as he approaches the age of forty he finds himself wondering whether it is wise, and even possible, for him to continue in that field. As in the case of the professional athlete, he finds it more difficult than formerly to participate fully in the physical activities of his work, and while he can readily adapt much of his work to his lessened interest in and capacity for exercise, he is not at all sure that he can really do his work as well without participating in the physical activity itself. It is therefore common for teachers of physical education to shift to the administrative aspects of their work (supervising younger and more active teachers and their programs), and to transfer to other aspects of education, particularly general administration (principalships and superintendencies) in the case of men, and counseling, student activities, and discipline (counselorships and deanships) in the cases of both men and women. Some become summer camp directors, thus shifting to another type of administrative work in which the physical education background is valuable.

The occupation of aircraft pilot is a classical example of a normal-entry early-leaving occupation, but in this case the occupation is young enough so that there is some doubt about the actual leaving age. The experience of commercial airlines now suggests that it may be a normal-leaving occupation. It has been widely held that pilots become too old, by the time they reach forty, to continue to be effective, although the official retirement age is sixty for scheduled airlines, and some pilots have recently retired at that age. Interviews with a large number of pilots employed by one of the major scheduled airlines shortly after World War II made it clear that many of the men in this occupation felt uncertainty as to what they would do when they reached the age of forty or forty-five, when they would be "too old to fly." As many airline pilots are now approaching and passing this age, and as neither they nor their employers find retirement from flying necessary, our conception of this as an early-leaving occupation may change, or we may simply push the presumed age of withdrawal from forty to fifty or fifty-five. This is one instance in which the obvious importance of the outcome (life or death for passengers and crew) of a practice will probably bring about a clear understanding of the life span of an occupation; unfortunately, for most occupations the good or bad effects of established withdrawal or retirement ages are not so clear and do not lead to the evaluation of these practices. Airline stewardesses are another early-leaving group: their average work life is typically two years, according to some major airlines.

Normal-entry Normal-leaving Occupations. If the term "normal" is

properly applied to this group of occupations, it should prove to be the largest single group. This expectation must be qualified, however, in view of the possibility that many of the occupations in our first category (early-entry early-leaving) may be steppingstone or stopgap jobs from which people move to vocations in the category under discussion. Thus the messenger may in time be mature enough, and may have learned enough in night school or on the job, to be able to transfer to a job as office clerk at the normal entry age, and the jumper on the delivery truck may shift to the job of locomotive fireman when he attains the degree of physical and emotional maturity which is characteristic of entrants into that field. The early-entry early-leaving occupations could therefore be at least as numerous as the normal-entry normal-leaving occupations.

In this category are such occupations as those of teacher and engineer, which are typically entered upon completion of college preparation and from which retirement is customary at age sixty-five or seventy. Other occupations which are normally entered after graduating from high school, from one or two-year business or technical courses, or from an apprenticeship, and from which retirement at about age sixty-five is common, also belong in this category: office clerk, bookkeeper, accountant, stenographer, mechanic, machinist, plumber, painter, and auto mechanic are a few examples.

Normal-entry Late-leaving Occupations. The lack of objective data makes the assignment of occupations to this category especially difficult, for while experience in a placement or employment office permits the making of observations concerning entry ages (and the U.S. Employment Service has classified entry jobs in the *Dictionary of Occupational Titles*), systematic attention to leaving ages is relatively new and there is virtually no pool of information from which one can draw. The impressions of a single observer, upon which one is forced to rely, may well lead to mistaken conclusions. Perhaps the occupation of banker is one which belongs in this category, at least in so far as the higher level jobs are concerned; other responsible financial occupations such as those of broker and investment counselor probably are in this group, because of the fact that accumulated knowledge and wisdom, combined with status, makes it possible for a worker to continue to be productive long past retirement age without undue strain.

Some normal-entry occupations such as those of cobbler and carpenter are late-leaving fields because the worker is semi-independent and can adapt his work to his capacities. The cobbler who begins to feel the effects of aging can slacken his pace or assign some of his tasks to a helper, since he usually works in his own shop or as an employee in someone else's small shop. If

competition is too great for him to hold his own as a low producer, he may still be able to work some as an extra during rush periods. This is true also of the carpenter, barber, and custom tailor. In the cases of most such craftsmen it is often possible for them to continue to work as small independent jobbers after they can no longer compete as regular employees, for they can generally find customers who are willing to accept slower work completed by a skilled worker at less than customary costs.

Late-entry Early-leaving Occupations. Perhaps the wastefulness of a situation in which people could only enter an occupation late in their working lives, only to be forced to leave it after a short time and before normal retirement, has prevented the development of occupations which might belong in this category. Either because of this, or perhaps because of limitations in the writer's opportunities to observe, no occupations have been noted which appear to belong to this group.

Late-entry Normal-leaving Occupations. The late-entry vocations are typically those which require considerable advanced training, or which are so responsible in nature that a considerable period of work in some other capacity is required before the individual is deemed to have proved his worthiness of such trust. Occupations which are entered late because they make few demands on aging workers are by their very nature excluded from this group of late-entry but normal-leaving vocations and are classified separately.

Locomotive engineers are probably the prototype of the vocation which can be entered only after substantial experience in another occupation involving different duties. The would-be locomotive engineer first demonstrates his trustworthiness and reliability by working for some years as a fireman, even in the age of steamless, and therefore fireless, engines.

The occupation of school superintendent is another case in point, if it is considered as distinct from that of teacher as some school administration specialists contend it should be. The profession of counseling has also traditionally been one of this type, for despite the fact that it requires special professional training it has typically been open only to persons who have first acquired some other type of professional training and who have worked for some time in another field. This has been true both of vocational counselors in social agencies and of counselors in high schools, for while the latter must prepare to be teachers and serve as teachers for a number of years before becoming counselors, so have the former typically been college-trained business men or women, social workers, or engineers. But the changing nature of the school administrator's work and the increasing professionalization of counseling as a field suggest that these occupations may soon belong in the

other type of late-entry normal-leaving occupation, that requiring extended professional preparation which includes physicians, lawyers, psychologists and university professors in all fields.

Late-entry Late-leaving Occupations. The final group of occupations consists of those which are entered relatively late in life and which are left later than usual in life. These seem, judging by observations, to consist of two quite different types of vocations. In one subgroup are found a number of occupations in which maturity, experience, a reputation for sagacity and integrity, sometimes combined with long professional training, are important, and in which the individual can to some extent set his own pace: possible illustrative occupations are those of judge, politician-statesman, and life insurance salesman. In the other subgroup are a number of occupations which make little demand on training, mental ability, physical stamina, or experience, and which accordingly pay too poorly to attract and hold men and women who have family responsibilites: typical of such occupations are those of watchman, bootblack, messenger, and elevator operator. These are, it has been seen, jobs which are often filled by inexperienced and untrained workers who soon leave them for more demanding and more rewarding work, apparently to return to them in old age when unable to hold more highly regarded and rewarded types of positions.

Transfer Fields

The fact that some occupations which may be entered early or at the normal time are typically left before the worker's working life is ended raises questions as to the occupations to which they transfer. Similarly, the fact that some occupations are entered relatively late in the worker's working life raises questions as to what such people do prior to entry into the belated occupation. Specifically, one may ask what the members of occupations such as messenger, professional baseball player, and airline hostess transfer to when they graduate or withdraw from their early-leaving occupations, and one may inquire as to how the judge, the senator, the watchman, and the elevator operator earned their livelihoods prior to being old enough to qualify for, or be downgraded to, their late-entry occupations.

The answers to such questions are of vital importance to those involved. In some fields of work they are well known, but in others the answers are not clear. The airline stewardess typically leaves her work to marry, hence her very brief work life, and this tends to be true also of occupational therapists, but the career of airline pilot is only now becoming old enough for data to collect as to the later careers of that group, and pilots still tend to wonder what comes next. Experience shows that they tend to think of quite different

types of work: chicken farms, a small business, only rarely something in aviation, for they have gone so high in the salary scale in that field, and have skills transferable to so few air transport ground jobs, that they see no future there. Like the hostesses, they are promoted out of the field, but to careers less clearly charted even than that of marriage!

The physical education teacher, on the other hand, has some rather clearly defined lines of transfer and advancement. It has already been seen that he advances to a supervisory and desk job in his specialty, or he may take supplementary preparation during his summers and evenings and change to another teaching field, or to administrative work in education, which is less demanding physically. Thus the physical education teacher can plot his career in advance if he is farsighted, and be prepared to make appropriate changes at the proper time of life with a minimum of stress or distress. The pilot, however, may well make the transition with more difficulty, for he does not know just when he will need to make it, nor even that he will actually have to change occupations, and he has no clearly defined lines of transfer to guide him in making the change if and when it is called for.

As vocational counselors and counseling psychologists accumulate experience they acquire a fund of information concerning occupational life spans and transfer fields, but this information is incomplete and often inaccurate due to limited or poor sampling. An important need in the fields of vocational guidance and personnel work is the analysis of occupations in terms of life spans and lines of transfer and advancement, and the organization and dissemination of this information for guidance purposes. The study by Bookbinder is a rare example of such an investigation (41).

Yearly Earnings, Life Spans, and Life Earnings

Closely related to the occupational life span is the question of occupational income. It is a characteristic of some short life span occupations that their rewards are relatively high: the airline pilot and the airline stewardess earn higher annual salaries than do their more pedestrian counterparts, the cross-country bus driver and the restaurant waitress. This is in part due to the dangers of air transportation, but the dangers of coal mining have not resulted in a similar elevation of miners' wages. The radio and movie star also are more highly paid, on an annual basis, than one might expect from the educational and experience requirements of their work, and similarly the professional baseball player and boxer. Common factors in these highly paid occupations are the supply-demand ratio and the occupational life span.

The supply and demand of workers as a factor in vocational choice and

success are dealt with elsewhere. Our concern here is with the possibility that the length of the working life in an occupation may be related to earnings. Unfortunately, there has been practically no analysis of data bearing on this question, although Clark (68) completed a pioneer study of annual and life earnings in various occupations a score of years ago. His study suffered from the inadequacy of the data with which, for lack of better, he was forced to work. Obtaining estimates of the average working life in a number of occupations, he also ascertained average earnings during each year of the working life, and thus obtained figures for the life earnings characteristic of each of these occupations. Physicians were the best-paid occupational group, with lawyers, dentists, and engineers next, in that order. Teachers and nurses were at the bottom of the list of professions. Most of the occupations studied were professions, and it is relevant to note that it is the professions with the longest training programs, i.e., in which entry takes place latest in life, that have the highest incomes. Society rewards the delayed-entry occupations with higher earnings, paying more annually and over the years by permitting the worker to use his skill and knowledge longer.

With the exception of engineers, the occupations tentatively classified in Table 3 as Normal-Entry Normal-Leaving are not characterized by high earnings. The only listed Early-Entry occupations which are highly rewarding are those which are also Early-Leaving *and* which have no counterparts in the Late-Entry Late-Leaving group. The Late-Entry occupations which are not typically jobs for downgraded semi-skilled workers are relatively highly rewarded. If, then, the occupations listed in Table 3 are a fair sample (they may not be, for they were not selected with this in mind), the short life-span occupations do indeed tend to have high earnings, when they are entered relatively late in the working life or when they are early or normal-entry occupations with no logical transfer occupations to which workers may go after early retirement.

The implications for vocational counseling are clear. Persons considering early-leaving occupations need to consider not only lines of transfer at the end of their first careers, but also the relative size of their earnings—and income taxes—in their first and later careers. Their largest annual earnings, if they enter the entertainment, sports, or hazardous occupations in this category, will be rather early in their careers; they will need to save them in order to even up their life earnings. If other early-leaving occupations are considered, it is not so much life earnings as transferability of employment, the ease of shifting to a new career, which is important.

Similarly, students aspiring to late-entry occupations can legitimately look forward to relatively larger annual and life earnings than otherwise, pro-

vided they have the resources or make the intermediate career plans which are necessary for preparation for a late-entry occupation.

AGE AND OUTPUT

The short occupational life spans of professional athletes are, obviously enough, related to the physical demands of the job and to the declining physical capacities of the athlete. Boxers, tennis players, even baseball players reach a point in their late twenties or early thirties when they cannot keep up a fast pace, when they cannot stand grueling opposition, as they did in their early twenties. They reach their age of maximum output early in life, and their productivity declines below the economically justifiable limit just at the time at which most men are getting firmly established in a career.

This raises questions about age and output, or age and achievement, in other fields of endeavor. Is it perhaps because the age of economically justifiable productivity is reached late in life by judges and senators that these tend to be late-entry occupations? And what about painters, poets, physicists, and philosophers? Do men in these occupations tend to be more productive at some ages than at others? Popular streotypes suggest that this is the case. Professors often tell their graduate students that if they are going to make any important original contributions it will be before they are forty years old. Foundations often restrict grants to persons under thirty-five years of age. But one cannot be elected to the Senate until the age of thirty, and in most states one cannot even vote until the age of twenty-one. What, then, are the facts on age and productivity?

Some Facts. The relationship of age to achievement in a variety of occupations has been extensively and intensively studied by Lehman (187), less so by Davis (82) with similar results. Using both quantitative and qualitative criteria in studies of creative persons, Lehman found considerable agreement. According to his data, generalizations which are valid concerning the years at which *the best work* is produced also hold for the years during which *the most good work* is produced. But the nature of the generalizations concerning age varies somewhat with the type of occupation.

Chemists, for example, tend to do their best work when quite young, between the ages of twenty-six and thirty. The best age for the production of great novels tends, however, to be from forty to forty-four. The most productive years for a number of representative professions are given in Table 4 below.

Although critics in the specialties involved have pointed out serious defects in some of the data which Lehman has analzyed in reaching conclusions, the

general conclusions seem valid nonetheless. For example, the art critics whose judgment caused Millet's *Gleaners* to be listed among the "best paintings" may, in present-day judgment, have been catering to passing poor taste—but how can *we* be sure today's taste is better? Similarly, the delayed publication of some of Walter Savage Landor's works, not taken into account by most literary historians, may make some of Lehman's data questionable, but this is hardly likely to vitiate the data and conclusions based on a large number of authors.

TABLE 4. THE MOST PRODUCTIVE YEARS, AFTER LEHMAN (187)

Science		*Literature*	
Chemistry	26–30	Odes	24–28
Surgical techniques	30–39	Satiric poetry	30–34
Psychology	30–39	Tragedies	34–38
Bacteriology	35–39	Novels	40–44
Musical Composition		*Social Leaders*	
Instrumental selections	25–29	College presidents	50–54
Orchestral music	35–39	Senators since 1925	60–64
Cantatas	40–44	Justices, Supreme Court	70–74

Physical scientists tend to produce their great discoveries at an early age. Their age of maximum productivity comes earlier than it does in the case of biological scientists. Natural scientists in general appear to earn fame earlier in their fields than social innovators and administrators do in theirs. Certain types of outstanding music and literature are produced at earlier ages than at others: the mid-twenties appear to be an age of romance, the early thirties an age of disillusionment, the middle thirties an age of despair, and the early forties an age at which a newly attained perspective leads writers to portray life in great novels. It is at about this same age, Lehman's data show, that the greatest philosophical works tend to be written. And it is only after people have passed the peak of productivity for philosophy that college trustees and the public are willing to elect them to administrative, legislative, and judiciary positions!

Most producers of great inventions, discoveries, ideas, or works of art, as Lehman shows, do their first great work (but not their greatest) by the age of twenty-five. There are exceptions, and Lehman cites some, but by and large great promise makes itself visible in early adulthood. The occasional "late bloomers," like Kant, to the contrary notwithstanding, great producers produce more of their high quality work early in their careers, more of their less distinguished work later in their careers. The rate of good production

goes up rapidly, as well as early, in life. It declines late and slowly, but the highest quality work falls off more rapidly than the less distinguished work of the same person.

During the nineteenth century the age of maximum productivity went down, that is, more younger men were becoming productive, but it is not clear whether this is still true. On the other hand, social leaders (administrators, legislators, etc.) are becoming older. It seems to be a characteristic of established societies that only the elders rule, whereas in more disturbed societies younger men seize leadership. Thus the ages of Jefferson, Adams, Monroe, Madison, *et al.* were younger when they led the nation than are the ages of their present-day counterparts in Washington.

Why Creative Thinkers Are Young. A variety of reasons have been advanced to explain the tendency for the most creative work to be done by younger men rather than by those who have had more experience and who have more perspective. Some of these involve physical condition, such as the decline in vigor after age forty, the physical impairments of age, and illness. Others involve the changes in the work situation which are produced by success. These include administrative duties and public service activities which reduce the amount of time and energy available for the solitary and small group work necessary for creativity, and the reduction of incentive to achieve, once renown has been won or a source of steady income has been acquired. Domestic situations undergo comparable changes: a house with wife and children require more time and thought than do a small apartment and a working wife.

These are negative factors in the older worker's self and situation. But there are also positive factors in younger men which materially help the latter. An established research worker works in semi-isolation, for he has established himself in one field of work, he communicates largely with contemporaries in the same specialty or with his students, and he keeps forging ahead in directions in which he has already pioneered with some success. The younger scientist or artist, on the other hand, is not yet established. Instead, he is in process of making his own synthesis of what he has learned from various masters, he seeks new directions which look promising for pioneering, and he attacks new problems with new insights. He is productive partly because of his own original synthesis of the contributions of various specialists who have communicated more effectively with students than with each other. The younger man is more creative simply because in him are combined the newest insights of his several masters. He in turn becomes the master.

SUMMARY

In this chapter we have examined the duration of the working life in a variety of occupations, and have seen that occupations can be classified according to age of entry and age of leaving. Occupations which are typically entered early in the working life have certain characteristics in common, including minimal training requirements and, except for entertainment occupations, minimal pay. Normal-entry occupations tend to require more education and to be better paid. Late-entry occupations tend to have high educational or experience prerequisites and to be well rewarded, except when they are last-resort occupations for semi-skilled and unskilled workers who have been downgraded because of declining capacities.

Early-leaving occupations create problems of transfer to other occupations and of starting new careers at what is normally the period of establishment or maintenance, sometimes with considerable advance opportunity to accumulate capital and, in many such occupations, with little opportunity to accumulate capital for the transition. The lines of transfer for many occupations are clear; for many others, vague and uncertain. Late-entry occupations which have specific educational or experience requirements tend to reward generously those who are able to undergo the preparatory experiences.

The relationships between age and achievement have been reviewed. Creative thinkers tend to start producing early in their careers, and to continue producing although at a slowly declining rate. Reasons for these trends have been pointed out, reasons which are partly physical, partly psychological, partly situational. Creativity was seen to come earlier in the physical than in the biological sciences, and earlier in these than in the social sciences and philosophy. In music and literature, relationships between type of creation and age were noted. The tendency for society to preserve institutions by electing older men as leaders, except in periods of turmoil when innovation is called for and younger leaders emerge, was also commented upon.

PART 2

THE COURSE AND CYCLE OF THE WORKING LIFE

The field of vocational guidance has drawn primarily from the psychology of individual differences, from educational studies of occupations, from economic studies of occupations, from economic studies of occupational trends, and in more recent years, from the field of personality theory and psychotherapy. From the first four sources it built up a body of knowledge concerning occupations, together with an armamentarium of instruments and techniques for relating personal data to job information and for helping the student or client to make occupational plans and choices. From the last, vocational guidance acquired a deeper understanding of persons and of ways of furthering self-realization. The focus of vocational guidance has been on vocational choice, vocational success, and more recently, vocational satisfaction. These are all vitally important topics, and Part 3 of this book is devoted to their understanding. But in concentrating for so long on these topics, the field of vocational guidance has failed to pay attention to equally important issues which have been studied by kindred disciplines.

The neglected questions concern the nature, sequences, and determinants of career patterns. The kindred disciplines which might have supplied answers to these questions are developmental psychology and occupational sociology. While it is true that some developmental psychologists would probably be surprised at being thus grouped with sociologists, and vice versa, the fact is that they have been working on closely related topics. These topics are of vital importance to vocational guidance, but communication between the various fields has been minimal, and research and teaching in each area have generally proceeded without benefit of much cross-fertilization.

In this Part, then, the concepts of career patterns and of developmental life stages are explored, their use as a theoretical framework for vocational guidance is discussed, and available data concerning the nature and determination of career patterns are organized for use in vocational counseling.

5

CAREER PATTERNS AND LIFE STAGES

The term *career pattern* originated in the field of sociology, in the study of social mobility by means of occupational mobility (78, 105, 217, 295). It closely parallels, both in meaning and in time, the psychological concept of *life stages* (50). The sociological term refers to the sequence of occupations in the life of an individual or of a group of individuals. This sequence may be analyzed in order to ascertain the major work periods which constitute a career. The psychological term is derived from the analysis of life histories in which the major events and concerns group themselves and vary from one stage of life to another, justifying the classification of life into a sequence of characteristic stages.

The first research in career patterns was carried out by Davidson and Anderson (78) in the city of San Jose, California, and published in 1937, although many of its concepts were derived from Sorokin's work on social mobility (295) a decade earlier. Job sequences of men from various socioeconomic groups were traced and patterns of careers characteristic of each group were established. Further work along the same lines by Form and Miller (105) in 1949 added substantially to theory and fact in this field.

The basic life stages of infancy, childhood, adolescence, adulthood, and old age have of course been known and widely used since time immemorial. Important work in psychological life stages was done by Buehler (50) in 1933 and was utilized by some writers of texts in developmental psychology in subsequent years (251). But the concept of life stages has not been used as much as it might have been in the formulation of research problems or in organizing the data of vocational psychology.

LIFE STAGES

The psychological life stages defined by Buehler as a result of the analysis of life histories were five in number. The Growth Stage extends from conception to about the age of fourteen. It is followed by the Exploratory Stage, which includes the period from about age fifteen to about twenty-five. The Establishment Stage comes next, including the years from twenty-five to about forty-five. Then comes the Maintenance Stage, which

ends at about sixty-five. The final stage is that of Decline, beginning at about sixty-five.

All but the first of these stages will be discussed in subsequent chapters, but a few words of explanation may be desirable here. The age limits are considered by Buehler to be approximations, which vary considerably from one person to another. Some people keep on exploring, that is, attempting to find their places in life and to develop and implement adequate self-concepts, for some years after they enter their thirties; some have already "found themselves" vocationally, socially, and personally by the time they are in their twenties, and are well on the way to establishment before they are twenty-five. Goethe, for example, was famous at twenty-five, Pascal was a celebrity at a younger age. Some people, to take the other extreme, keep on being professionally active long after they are sixty-five. Gladstone and Winston Churchill are two outstanding examples, as was also Goethe (Pascal died in middle age).

The processes of exploration, establishment, maintenance, and decline are not simply vocational, but involve all aspects of life and living. They operate in the lives of women as well as of men, as Buehler showed. Adolescent *exploration* includes developing an understanding of the self, trying out the role of budding adult, finding a mate, finding an occupation, finding one's place in the community. *Establishment* similarly includes establishing a family, a home, and a role in the community as well as making a place for one's self in the world of work by establishing a practice, building a business, or developing a work history which makes one easily classifiable as an assembly line worker or as a buyer of ladies' garments. *Maintenance* is the process of holding one's own in the family, keeping the home intact, keeping up appearances in the community, and seeing that the business continues to flourish or that the textbooks get revised periodically and keep on selling. *Decline* manifests itself not only physically in decreased energy and stamina, and vocationally in the need to taper off in the volume of sales handled, in the number of students seen, or in the need to transfer from work as a longshoreman to work as a night watchman, but also in decline in other respects, as in the lessening of family responsibilities and restriction of roles in the community. The older person becomes less active in the community as he enters the stage of decline, restricting the number and complexity of his activities; he also becomes less active in the home, leaving more of the maintenance and repair work to others, taking less responsibility for the direction of family life and family affairs, and in due course even taking less responsibility for himself.

The *sociological classification of life stages* by Miller and Form is work

centered although they were concerned also with security (105, 217). They distinguish first the *Preparatory Work Period,* in which the child begins to develop an orientation to the world of work through home, neighborhood, and school activities. Then comes the *Initial Work Period,* beginning with the first part-time or summer work experience at about the age of fourteen, in which the adolescent is introduced directly to the world of work as a part-time or marginal participant. The *Trial Work Period* follows, beginning with entry into the regular labor market some time between sixteen and twenty-five and continuing until a stable work position is located, usually after considerable changing of jobs until a type of work is found in which the young adult can hold his own, at about the age of thirty-five. The *Stable Work Period* begins at about age thirty-five and continues until age sixty; it corresponds to the latter part of Buehler's Establishment and to most of her Maintenance Stages. Finally, the *Retirement Period* begins at sixty or sixty-five.

Career Patterns: Men. The basis of Miller and Form's classification of work periods was the work histories of a small but selected sample of men in the state of Ohio. Having established that their job sequences could be classified into these five stages, they then proceeded to see if the sequences of these work periods were patterned in different ways in different occupational or socioeconomic groups. This was as Davidson and Anderson had done fifteen years earlier, with this important innovation: they utilized the concept of life stages or work periods, thus making the description of job sequences easier and more meaningful. Four types of career patterns were found in this sample of men, simplifying Miller and Form's sixfold classification (217:712) to eliminate duplication, which may be described as follows:

1. *The stable career pattern.* In this category are found most professional careers, many managers, some skilled workers and to a lesser extent semi-skilled and clerical workers. These are persons who have gone directly from school or college into a type of work which they have consistently followed: in other words, they have essentially skipped the trial work period.

2. *The conventional career pattern.* In this pattern the sequence of jobs follows the typical progression from initial through trial to stable employment. This pattern is most typical of managerial, skilled, and clerical workers, but characterizes some professional and domestic workers.

3. *The unstable career pattern.* Here the sequence is trial-stable-trial: the worker does not succeed in establishing himself permanently in what might have been a lifetime job or occupation, but instead gives up his potential career in one field and goes off in a different direction in which he may

or may not establish himself. This sequence is seen most often in semi-skilled, clerical, and domestic workers.

4. *The multiple-trial career pattern.* This is the pattern of frequent change of employment, with no one type sufficiently prolonged or dominant to justify calling the person established in a career. This type of sequence is observed most often in domestic, clerical, and semi-skilled workers, who not infrequently shift from one type of work to another and accumulate the most disconnected of work histories.

When the incidence of these career patterns was analyzed according to occupational groups, it was found that *professional* workers typically have varied initial work experiences, and tend to proceed immediately from college to stable professional employment. *Managerial* workers typically have varied initial work experience, varied trial jobs, and then stabilize as managers. *Clerical and sales* workers normally have a variety of low-level initial experiences, somewhat varied trial jobs, and their careers stabilize rather late. *Skilled* workers have patterns rather like those of clerical and sales workers. *Semi-skilled* workers have somewhat varied initial and trial jobs, stabilize late. *Unskilled* and *domestic* workers are vertically immobile during their initial and trial periods, and tend not to stabilize in any one field, but rather to have a succession of varied low-level occupations. The higher the level of the occupation of the father, the greater the likelihood that the son will have a stable career pattern.

Miller and Form found that 73 per cent of the white collar workers had secure types of career patterns; of these, the professionals were the most secure, 88 per cent of them having had stable work histories. Only 46 per cent of the blue denim workers were so fortunate, among whom the unskilled were worst off with only 24 per cent having stable histories.

The career patterns typical of white and blue collar workers are graphically portrayed in Figures 2 and 3, taken from Miller and Form. These, like similar figures prepared by Davidson and Anderson in their earlier study, bring out clearly the relationship between father's education and father's occupation, father's occupation and son's education, and son's education and son's occupation. The "apprenticeship" years of the managerial and skilled workers are clearly shown by the dips in their curves, and direct relationship between trial and stable employment is brought out for the other occupational groups.

What these figures do not bring out is the variations from these patterns in each occupational group. Knowledge of the career pattern which characterizes most sons and daughters of semi-skilled workers is helpful in vocational guidance, but equally important is knowledge of the nature, frequency, and

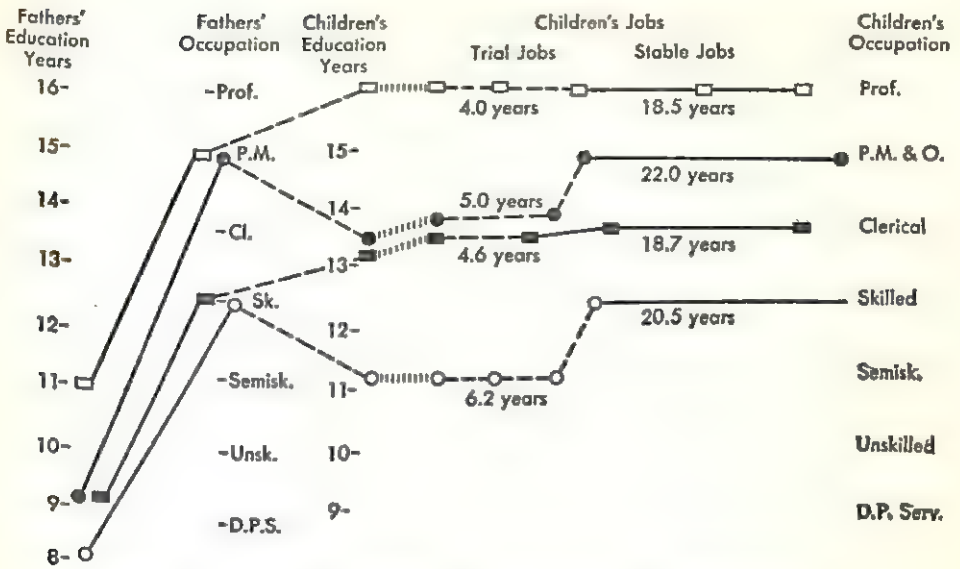

FIG. 2. CAREER PATTERNS OF HIGHER LEVEL OCCUPATIONS: MILLER AND FORM (217:741)

causes of variations. It is important to know why some sons and daughters of assembly line workers enter professional occupations, why some sons of physicians become office clerks and longshoremen. The determinants of career patterns have virtually not been studied, except singly and in quite

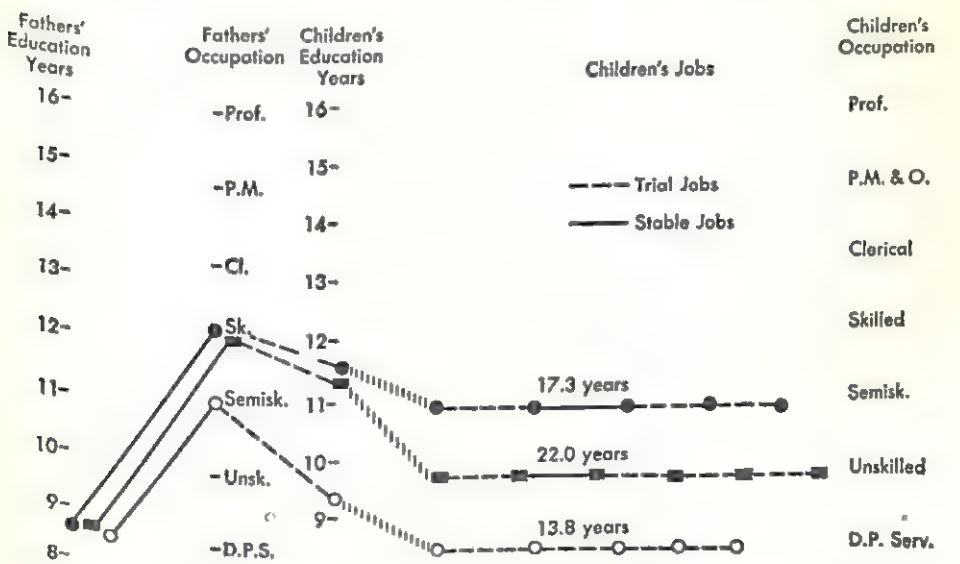

FIG. 3. CAREER PATTERNS OF LOWER LEVEL OCCUPATIONS: MILLER AND FORM (217:742)

different contexts, as in the analysis of the relationship between intelligence and occupational level (323).

Career Patterns: Women. Despite the numerous and valuable studies of women's occupations and careers conducted by the Women's Bureau of the United States Department of Labor (379) and various interested groups and individuals (e.g., 106), women's careers have not been studied in the way in which Miller and Form studied men's careers. The emphasis in this chapter, and in the other chapters of this Part, is therefore inevitably on men's careers. With a steadily increasing percentage of women in the work force, and larger numbers of married women continuing to work after marriage, or returning to work after their children are old enough for this to be possible, this discrimination in favor of men—who, incidentally, have no "Men's Bureau," die sooner, must live longer to receive Federal Old Age Benefits, and leave the bulk of the wealth in the control of women—is regrettable. As Mueller points out in her delightful but erudite treatise on *Educating Women for a Changing World* (225:9), there are "many differences in the life patterns and social roles of men and women."

The sex roles of men and women are socially as well as biologically determined, as anthropological studies and the changing roles of women during the past century make clear. But women's careers, career orientations, and career motivations differ from those of men and are likely to continue to differ in important respects. An adequate discussion of these differences becomes especially important as larger numbers of women participate in the work force. Since adequate data on the career patterns of women are lacking, an attempt is made below to organize into a logical scheme what data there are, together with some observations made in observing women's careers. In doing this, it is important to point out that woman's role as childbearer makes her the keystone of the home, and therefore gives homemaking a central place in her career.

This biological fact explains the findings of studies of the interests of women reviewed briefly by Mueller (225:134–135) and in more detail by the writer (313:436–437). Mueller concludes her summary of interest research by stating:

> This is a quantitative and erudite manner of saying that girls will be girls, or at least 90 percent of them will be girls, and the other 10 percent may find themselves in Who's Who! [She continues:] The significant thing is the far more uniform and standardized pattern of feminine interests than of masculine. John may want to be a lawyer, physician, engineer, farmer, statistician, radio announcer, but Mary, nine times out of ten, can see no further than her marriage. She wants a little job that will put her immediately into the company of men.

What the interest research shows is a dominant interest in "male association," which, as Mueller points out, needs to be taken into account along with the facts on the increasing percentage of working women.

It seems likely that the career patterns of women may be classifiable in the system outlined below.

1. *The stable homemaking career pattern.* This category includes all women who marry while in or very shortly after leaving school or college, having expected to do so and having had no significant work experience.

2. *The conventional career pattern.* In this pattern of working followed by homemaking the young woman leaving school or college goes to work for a period of several months or several years, in an occupation which is open to her without training beyond that which she obtained in her general education, in brief professional education substituted for general education, or in some relatively brief post-high school or postcollegiate education. Clerical work, teaching, nursing, occupational therapy, and secretarial work illustrate these types of occupations. They are generally viewed as stopgaps, but may first be thought of as life careers, with subsequent change of aspirations. They are often valuable as an opportunity for developing independence and a sense of being a person in one's own right. Marrying after this relatively brief work experience, the young woman becomes a full-time homemaker.

3. *The stable working career pattern.* The sequence in this type of career pattern is one of entering the work force on leaving school, college, or professional school and embarking upon a career which becomes the woman's life work. She may perceive it as a life career from the start: a small percentage of young women do have strong career (as contrasted with homemaking) motivation and interest. Or she may at first view her working career as a preliminary to marriage, whether as a stopgap job, a working career to continue with marriage, or a working career to resume after a period of full-time homemaking. This perception of working as a preliminary to marriage not infrequently changes to a perception of working as the life career, especially in parts of the country and in times in which women are more numerous than men. The change of orientation is, in these instances, often a difficult one to make.

4. *The double-track career pattern.* This is the pattern of the woman who goes to work after completing her education, marries, and continues with a double career of working and homemaking. She may take occasional time out for childbearing. The pattern is most common near the upper and lower ends of the occupational scale, among women physicians and scientists, and among women domestics, presumably because the challenge of the work, or the income it produces, is important to the woman in question. The double role

is in neither case easy, for the married working woman usually has two jobs, one with and one without pay.

5. *The interrupted career pattern.* Here the sequence is one of working, homemaking, and working while or instead of homemaking. The young woman works for some time, then marries, and then, when her children are old enough for her to leave them, when financial needs—including those resulting from being widowed or divorced—or interest in working become dominant, she returns to work. If she has children, the age at which she decides they can be left depends upon her socioeconomic status: the higher the level of the family, the older and more independent the children must be before the mother believes she may leave the home for work. The work to which the married woman returns may be that of her original working career, or it may be different: which it is depends upon what she has done with her training and experience during the full-time homemaking period, her interest in and ability to obtain refresher training, new interests developed while a homemaker, retraining possibilities, and local manpower needs and requirements. Thus many former teachers return to teaching, but relatively few former secretaries return to secretarial work.

6. *The unstable career pattern.* In women this type of career pattern consists of working, homemaking, working again, returning to full-time homemaking, etc. It results most often from irregular economic pressures which make extra earnings necessary despite homemaking preferences or needs, or from poor health necessitating giving up employment, or from a combination of these. This pattern is observed most often at the lower socioeconomic levels.

7. *The multiple-trial career pattern.* This pattern is the same in women as the similarly named pattern in men: it consists of a succession of unrelated jobs, with stability in none, resulting in the individual having no genuine life work.

Some Important Questions. The present state of knowledge and thinking concerning career patterns indicates that four kinds of questions may be asked concerning them. Most of these have not been answered at all adequately, and only one of them has been the subject of specific study.

1. What is the nature and content of the sequence of events in the life history, specifically schooling, job seeking, and job holding? This is the question of the shape of the career pattern and of its parts; it includes the question of the differences in the career patterns of various occupational groups. It has been studied by several sociologists, but the data are as yet very limited in nature and are derived from small and possibly inadequate samples.

2. What traits and factors determine the sequence of jobs in the career

pattern, and how do they account for the frequent deviations from the normal pattern for a given socioeconomic group? This is the question of the role of intelligence, special aptitudes, interests, and personality traits. It has been studied in other connections by many psychologists, but rarely as a multivariate problem and never in relation to career pattern theory, only in relation to questions of vocational choice and success.

3. What is the nature of the changes in the individual's thinking about work and about himself in relation to work? There has been little study of this question, although one study by a team representing several social sciences has been published (126). It is odd that the process of occupational choice has been so completely neglected: the Social Science Research Council's Seminar (35), Roe's treatise (268) coming off the press as this book goes to press, and the long-term Career Pattern Study (317, 323) are rare exceptions.

4. How can the study of job sequences, of the interaction of traits and factors, and of perceptions of self and of occupations, be brought to bear simultaneously to provide a better understanding of the nature and determinants of career patterns?

5. What are the important differences in the career patterns of women, as compared with those of men? And what are their causes?

6. What are the factors associated with these differences?

These are the questions which the rest of this book attempts to answer. This Part, Part 2, deals with our first question to some extent, and with our third, and to a lesser extent with the fifth. Part 3 deals with trait and factor theory: it bears on our second question, and to some slight extent on our sixth. It attempts to handle aspects of the third and fourth questions, does little with the relevant fifth or sixth. Finally, Part 4 considers the implications for guidance, personnel, and psychological services.

6

ADOLESCENCE AS EXPLORATION: DEVELOPING A SELF-CONCEPT

PERSPECTIVE ON ADOLESCENCE

Adolescence means, literally, growing up, becoming an adult. Viewed sociologically, it is the process of moving from one subculture, that of teen-agers, to another subculture, that of grownups (241). Viewed psychologically, it is the process of finding out what constitutes adult behavior, and it is the process of trying out various modes of adult behavior and of ascertaining which of these are both congenial to one's self and acceptable to one's associates.

Adolescence as Cultural Adaptation. The mores of the teen-age subculture are often different from those of the adult subculture. Adolescent boys often wear sport shirts and blue jeans to "work" (high school or college) and adolescent girls frequently wear bobby socks, blue jeans, Bermuda shorts, or sweaters and tweed skirts at their workplace (the campus). Their adult counterparts wear coveralls or business suits, or simple dresses, in their workplaces in the factory, store, and office. Spitballs and the giggles have their place in the study hall, in the opinion of the majority of their users, but not in the shop or office, in the esteem of their inhabitants. As a consequence, the teen-ager who has relied upon loud clothes and minor annoyances as means of getting attention finds that the patterns of behavior on which he has relied no longer bring the accustomed satisfactions when he is out of school and at work. Instead of relying on the outmoded behavior patterns, he must try other ways of winning the approval of those who surround him.

The problems of cultural adaptation become acute, and the process evident, at the time of actual movement from one subculture to another, as at high school graduation and entry into the labor market. But the process is not as sudden as this fact implies, for societies have ways of preparing their members for the transition from one stage of life to another. In our society this is primarily a function of formal education, but it is furthered also by many less formal institutions and mores. The widespread custom of working part-time or summers while in school or college is one illustration; scouting, with its passing of successive hurdles of achievement and leadership, is

another. The dynamic needs of the individual also encourage the individual to anticipate adulthood by playing adult roles. For example, boys often experiment with their fathers' razors, unbeknownst to their parents, in order to see what shaving is like; girls put on lipstick and paint their nails, and in pigtail days tried putting their hair up in play, all to see what it is like to be a grownup. Furthermore, adolescents and adults share many experiences, at least in middle class families (99). Adolescence is, clearly, a period of exploration. It is a period in which boys and girls explore the society in which they live, the subculture into which they are about to move, the roles they may be called upon to play, and the opportunities to play roles which are congenial to their personalities, interests, and aptitudes.

Adolescence as the Emergence of a Self-concept. It would be a mistake, however, to view adolescence solely as a process of finding out "what goes" in the adult world and then adopting those modes of behavior. The adolescent brings a great deal to this world himself: he brings his *self.* What he sees, what he tries, how well he likes it, and how well he succeeds at it, depend upon his self as well as upon the culture.

People are born with certain behavior potentials, with muscular, neural, and endocrine tendencies which make easier or more difficult the development of a given type of ability or personality trait. Beginning early in life these behavior potentials are acted upon by the environment in which the infant or young child lives: certain kinds of behavior are favored by parents and bring gratification, or are disapproved and bring punishment. Much early behavior is imitative: it stems from identification with those who can grant or withhold gratification. As the child's range of interpersonal experiences and relations widens, so his identifications become more varied and more diverse. Finding that he is both like and unlike the objects of his identifications, he begins to develop a concept of himself as a distinct person, as self rather than as other. This self has some characteristics like those of still others, and some, perhaps, which seem to be peculiarly his own.

These ideas as to his own characteristics, this concept of self, may or may not be realistic. But as the child and adolescent goes through life he tries out these ideas of himself on various persons and in various activities. Aspects of the self-concept which bring satisfaction are retained, while those which do not bring gratification are in due course rejected and replaced by traits and behaviors which stand the test of reality.

Some of the components of the self-concept are mutually compatible, but others may prove to be incompatible with each other. Conflict results, or perhaps anxiety, until, through environmental change, trial and error, insight, or perhaps psychotherapy, one or more of the conflicting traits or

behavior patterns is modified in a way compatible with the rest of the self. This is the process of personality integration.

By the time most people in Western culture reach adolescence they have had a variety of opportunities to develop embryonic self-concepts, to try them out in a variety of situations. These opportunities are found first in the home and in the neighborhood, then, as horizons and the scope of activities broaden, in the school and church, and then in community activities such as clubs and part-time or vacation employment. It will be relevant to examine, in somewhat more detail, the manner in which some of these social institutions contribute to the vocational exploration and development of youth.

EXPLORATION OF SELF AND WORK IN THE HOME

The child's first experiences with persons are in the home. His first opportunities to observe and to participate in activities are in the home. It is through it that he is introduced to the variety of roles that can be played in our culture, and to the variety of activities in which people can engage.

Role Models and Role Playing. The typical home includes at least two, and often one or more other persons in addition to a particular child. The father, mother, aunts, uncles, grandfathers, grandmothers, brothers, sisters, and even lodgers may live in the same household. Each of these other members of the family has his own personality, his own ways of thinking, feeling, and acting, and these sometimes vary with the role played by the person or persons with whom he is interacting. Despite these variations in individual roles, the roles in the home are readily classifiable on a sex basis and have been shown by Tyler (339) to be major determinants of interests.

Fathers often play a somewhat authoritative role, aided by absence from the home during much of the day and the fact that many domestic activities are planned around their schedules. The child is not infrequently told: "Your father will punish you for that when he comes home," or "You'll have to ask your father about that," or "We'll see what your father says when he comes home from work." The father may actively play the authoritarian role or he may, depending upon his personality, merely be a puppet and say what his wife wants him to say. The mother may visibly exercise the authority herself, putting the father in a subordinate position, or again father and mother may democratically share the authority; they may or may not include the child in the making of decisions in ways appropriate to his age.

In any case, the child has occasion to observe a number of different modes of behavior in the group situation.

Mothers often play a sympathetic, supportive, "mothering" role. Of course, some mothers "wear the pants," i.e., exercise the authority in the family, and in such instances the father or an older brother or sister may play the maternal or protective role. It is, in fact, not uncommon to see these two roles of detached authority and sympathetic protector played in groups other than the family, for instance, in military units, business organizations, construction projects, and even in the Christian concept of the Trinity.

But the authority-support dimension is not the only dimension which may be used to describe the roles observed in the home. The father, and often other members of the household, have jobs. As workers outside of the home they have their roles about which they talk, and they frequently bring their work into the home, whether in the form of papers in a briefcase, customers who must be seen in the living room, or jobs to be done in the basement shop. Thus the child and adolescent have opportunities to hear about and to observe roles other than those which are performed as a part of the regular domestic routines. It is for this reason that little children sometimes play at being "father and mother" with a smaller child, animal, or doll as their baby, but also sometimes play at being "teacher" on the basis of the tales told by their older siblings, or at being carpenters, firemen, policemen, or doctors on the basis of other observations and accounts. Larcebeau has thus shown that in France, at least, the sons of men employed in occupations which the boys can observe, e.g., the handicrafts, independent business, and professions, choose these types of work more often than the sons of other type of workers, e.g., factory workers, choose the occupations of their fathers (184). Others (13) have shown that knowledge of occupations is dependent upon contact with the occupation.

The normal play activities in which children engage provide, as implied above, opportunities for playing the roles which are learned through observation and hearsay. Some of the roles which are thus played bring the satisfaction of mastery, belongingness, or other personal needs; some bring the praise or approval of peers or adults; some result in frustration of the individual or the disapproval of associates. The satisfaction-producing roles are likely to be played again, and appropriate types of behavior may in due course be incorporated into the behavior pattern or personality of the player: the Greek myth of the smiling mask which turned an ugly face into an attractive one had its origins in a genuine insight into role psychology and personality development. And similarly, role playing which does not bring

gratification and approval is likely to be abandoned, and the related types of behavior are not likely to be incorporated into the personality.

The Home as a Workplace. But the home is not just a stage on which actors are observed in various roles and on which the individual himself may try out roles of his own choosing. It is also a hotel, a restaurant, a recreation center, a school, a laundry, a carpentry shop, an electrical shop, a farm, and a variety of other industrial, business, educational, and agricultural enterprises. These enterprises are carried on by the members of the household, and each one may have a part in many of them.

As the child matures he himself has increasing opportunities, and feels increasing demands, to work in these enterprises himself. In theory, if not always in practice, he may put away his own clothes and make his own bed (hotel work); set the table, wash dishes, cook, and wait on table (restaurant work); help plan family entertainment and outings, and supervise the play of younger children (recreation center work); he may help his siblings with their school work, wash and iron clothes, repair furniture and appliances, work in the garden or in the fields, and so on. In the course of these activities, or whatever combination of them he engages in, he finds out about the nature of the work, observes that men do some things and women others (339), learns something about other places in which it is also done, finds out how well he likes it, and compares or hears his performance compared with those of others.

This is self-exploration; it is also occupational or, better, pre-occupational exploration. Not being given to analyzing behavior and experience, lacking the perspective of a sociologist, psychologist, or educator, the child and adolescent, and even his parents, may not recognize it for what it is. But, with a greater or lesser degree of awareness of what is happening, the exploration takes place. The self-concept begins to take shape, the kind of role one may play in life begins to emerge, even in childhood, even within the shelter of the home. It would in fact be more appropriate to say, "*especially* in childhood, *especially* in the home," for studies such as one by Friend and Haggard (108) have demonstrated a relationship between having a suitable role model in the childhood home and making a satisfactory work adjustment in adulthood. Apparently the formation of the self-concept not only begins in childhood, but proceeds apace at that stage. Therefore adolescent exploration is not so much a process of developing a new picture of one's self as of putting it into words and thus developing a basis for finding out what sort of outlets there are in society for a person who seeks to assume a given kind of role, and then of making modifications in the self-concept to

bring it into line with reality. Adolescent exploration, then, may be viewed as a process of ascertaining and testing reality.

EXPLORATION IN THE SCHOOL

In contemporary cultures, the school as a social institution has taken over many of the functions formerly exercised by the home. It is obvious, then, that the school is the adolescent exploratory institution *par excellence*. The very word, education, e-ducere, means to lead out, to lead forth, to develop: in other words, to assist the individual to emerge in the adult world as an effectively functioning adult.

Formal Exploration. The curriculum of the early years in high school and in college may properly be viewed as exploratory in much of its content and purpose. Thus the original basis of the junior high school was provision of opportunities to try out a variety of subjects, ranging from the various shops to two or three foreign languages, so that a wise choice of high school curricula might be made. The need for such exploration was made clear by the availability of both humanistic and scientific college preparatory curricula, commercial sequences, and trade courses, requiring different patterns and levels of ability, different types of interests. Similarly, the first two years of college are viewed as having not only general educational value, but also survey or orientation values. The student can find out, in survey courses in the natural sciences, social sciences, languages, and humanities, in which of these fields his interests and abilities are most likely to find an appropriate outlet.

Orientation courses are offered during the first year or two of each level of education beginning in junior high school, and including, in some instances, the first year of graduate school. Such courses often include both a unit in self-analysis, in which the student makes a study of himself in order better to understand his abilities and interests, and a unit in which he studies the educational and occupational opportunities which may be open to and appropriate for him, so that he may have a better awareness of how he may make use of them (14, 27). While it is true that many such courses are poorly handled, this is of course true of all other types of courses and is in itself not an argument against them. The real point is that many students, even as late as in the graduate or professional school, still need a great deal of orientation to themselves and to their prospective fields of work. This can be provided in lectures, field trips, films, reading, and discussion.

For example, the recent recipient of an M. A. in psychology, from a leading Midwestern university with a reputation for its emphasis on knowledge for its own sake rather than on its applications, came to New York City in

search of employment. In discussing where she might look for a job, and how to do so, she proposed to get in touch with psychiatrists in the metropolitan mental hospitals. She thus demonstrated an inadequate concept of her own role as a psychologist, for she was by no means ready, as a new M. A., to handle the work of a clinical psychologist without close supervision of a kind that only a psychologist could give her. She also demonstrated that she did not know the labor market for, in well-organized and adequately staffed mental hospitals such as are usually found in metropolitan areas, beginning psychologists work under the direction of senior psychologists, and are employed by the chief of the psychological service rather than by a psychiatrist.

Activities are another means by which schools and colleges provide exploratory experiences (14, 27). Clubs make possible orientation to and tryouts in farming, science, journalism, drama, and other fields of work avocationally, without formal commitment. Assembly programs bring occupational films, speakers, and similar resources which give students something of a picture of vocational opportunities, activities, and requirements. Occasionally a group of students undertakes a special project which has indirect exploratory value, such as providing a recreation program for the patients of a hospital ward one day each week, or participating in the remodeling of a settlement house during a summer vacation.

Informal Exploration. Exploration of the self and of one's role in the world of work goes on not only in formal activities such as those described above, but also in more informal situations. Primary social groups play a major part in attitude formation, and how one perceives one's self and one's role is partly a matter of attitudes. One new high school graduate, talking with his counselor at a guidance center, reported that: "Every boy in my class said, in the Yearbook, that he was going to be a doctor, lawyer, or engineer; I said engineer too, but I know that stuff's not for me." Despite this knowledge, he felt impelled by group opinion to express some such ambition for publication. The role he felt he might actually play in life was not one which he believed would win approval in his group.

The comments of friends, the intimate "bull session" in which aspirations are bared and evaluations shared, help the individual to clarify his picture of himself and of his roles in relation to others. He may not, like the boy above, fully accept and internalize the attitudes of his peers, but the tendency is to do so. And when peer attitudes do not prevail, it is very often because the attitudes of other groups, such as those of the home or of the social status group, are even stronger determinants of behavior. A case in point is the electrician's son who, despite abilities and interests which would have made engineering appropriate and possible, himself became an electrician. He had

so completely assimilated the values and perspectives of the skilled workers represented by his father and his father's friends, that to think of going to college, poring over books, and having a "soft" job (one on which men wore white collars and business suits) was impossible. It just did not match the self-concept which his environment had caused him to develop. (The accent is on environment in this case, since his capacities and propensities would have made it just as easy for him to see himself as an engineer).

New Models. Through both its curriculum and its related activities, the school also provides new role models for the child and adolescent. He encounters authorities other than those he knows in the home, finds that his peers have heroes other than *his* father, and develops warm and supportive relationships with other adults and with his own age group. Patterning his behavior after some of these new models, finding his attempts to play roles accordingly approved or disapproved by these key figures, finding that playing these roles gratifies or frustrates his needs, his behavior is modified and developed by forces from the broader social environment, forces which may or may not be the same as those to which he is exposed at home.

Aspiring to a profession or a craft in response to encouragement at school is relatively easy when the home values also make such a self-concept natural, but it may result in conflict if attitudes at home place a higher evaluation on other types of work. To see one's self as a physically powerful individual who can handle heavy work, cast in the role demonstrated by an unskilled father and his friends, makes it difficult to play, in fantasy and in related school activities, the role of an intellectual who works with abstractions in a sheltered environment. But, given adequate role models in school or elsewhere in the community, an individual with appropriate aptitudes and personality traits often finds it possible to develop a new personality integration. The new key figure makes it easier for him to visualize his real self as it might be; it frees him from the less appropriate mold in which he has previously cast himself simply because the key figure it represented was then the best available.

EXPLORATION IN PART-TIME WORK

For most high school and college students part-time and vacation jobs are primarily a means of earning money. In fact, to most educational institutions with placement services and employment programs for students the emphasis is on the earnings or on vocational training rather than on exploration and orientation, as an analysis of their catalogues and related materials brought out some years ago (307).

Even some of the colleges which have become famous partly through their work programs, for example Berea and Antioch, do not view employment as

a means of vocational orientation or professional preparation. At Berea the emphasis has been on working one's way through college, while finding out what sort of occupation one might want to engage in later was not seen as something which could be facilitated by undergraduate employment. At Antioch the experience is the prime objective, but because of its general educational value, because of what it teaches about responsibility, society, and people rather than because it might help students to find out what they do well and what they like to do in the world of work. A survey of student employment at the University of Minnesota (342) cited a prime example of educationally wasted work experience: a medical student ran a clothing business, at the same time that a business administration student worked as a clerk in a local hospital (of course, the medical student earned considerably more than the business student)!

Some other colleges, and many high schools, have work programs which are planned for their educational value, but in these instances the objective is generally training rather than orientation or exploration (162). The co-operative work and education programs at such colleges as Cincinnati, Fenn, and Drexel are designed for students who have already chosen not only engineering, but a specialty within engineering. The same is true of high school co-operative work programs. It is only a program like that with which Bennington College experimented that aims to have exploratory as well as training values. In it, students were expected to work during a long winter vacation in either volunteer or paid employment in an occupation related to their major field.

But part-time and vacation work can have important exploratory values. It provides youth with an opportunity to develop mature work habits such as regularity, punctuality, responsibility, and meeting deadlines. It provides opportunity to mix with adults more or less as an equal, to become oriented, in other words, to the adult subculture into which the adolescent is about to move. The youth can then try out adult roles and test the reality of his self-concept. It is because of these experiences that, when the employment records of graduates of a co-operative liberal arts college were compared (70) with those of arts graduates from regular colleges, it was found that the former had more stable and successful employment records during the economic depression which coincided with their early work years. Those who had had meaningful undergraduate work experience were better oriented to and integrated into the world of work.

But if part-time or vacation work experience has some bearing on the student's vocational aspirations and plans, it also provides him with opportunities to test his aptitudes, interests, and skills, to find out whether or not

he likes that kind of work and whether or not he can do it to the satisfaction of others and of himself. Furthermore, he learns about some of the kinds of situations in which that type of work is carried on, some of the kinds of people, equipment, activities, and problems associated with that type of work. He can find out whether or not the role he might take in that type of work is congenial.

Since the youthful part-time or vacation employee is so youthful he is, however, likely to get something of a worm's-eye view of the occupation and of the enterprise in which he works. The credit department job the college student gets while regular employees are on vacation is likely to be that of assistant bookkeeper, making routine entries from sales records and credit reports and routing these forms on to the next clerk. He may never get a picture of what the credit department as a whole does for the company, nor of the various high-level jobs in that department. The high school girl who assists in a hospital laboratory during her summer vacation is more likely to spend her time cleaning equipment and handing things to the technician than in getting blood samples from patients or studying specimens under a microscope. Both jobs, and many others like them, can be made educational, but only if the supervisor and worker have orientation in mind and if both have skill in taking advantage of opportunities for observing, trying out, and discussing.

There is some danger, too, that the student will fail to realize how limited a perspective even good experience in one situation may give him. The technician's job in one hospital may be quite routine, with a limited variety of tests to be made and with limited opportunity for the technician to discuss diagnostic problems and findings with the physicians, whereas in another the technician may encounter a great variety of diagnostic problems and may have opportunities for conferences, study, and research. The opportunities for credit department clerks to use initiative and earn promotion may be very limited in one corporation, but appreciable in another, and morale may vary accordingly. First-hand experience on the job must then be supplemented by reading, interviewing, discussion with other workers, and counseling.

More valuable than the actual tryout experience, for many student workers, is the opportunity to make contacts with a variety of adults who earn their living in a variety of ways. The assistant bookkeeper may see other types of record work going on around him, some of it hand work and some of it machine work. He may on occasion have business in other departments, when he has opportunity to observe and hear about some of their operations. He may eat lunch and go to and from work with people in still other jobs

and departments. Similarly the hospital laboratory technician's helper may observe and assist not only the work of the technician, but to some extent also the work of receiving clerk, the business office clerks, the social workers, and the nurses. In one small hospital known to the writer, for example, the spatial arrangements and staff relations were such that it was in fact rather difficult for one staff member or volunteer not to become somewhat familiar with the activities, problems, and methods of other departments. Thus the alert student can obtain orientation to a number of fields of work in the course of one vacation job.

In closing this discussion of the exploratory value of part-time and summer work, obstacles in the way of using it as extensively as one might like should be recognized. Trade-union restrictions, child labor laws, prejudice against extreme youth, and plain inertia make it difficult to place adolescents in real work situations. Increasingly, the world's work is being done behind wire fences, inside brick walls (glass blocks and plate glass to the contrary notwithstanding), and behind closed doors through which only those who have employee's passes, who are "old enough to be reliable" and "young enough to be attractive," are admitted. It is hard enough for a youth even to get a glimpse of the working world; it is much more difficult for him to get a chance to try his hand at it.

THE RESULTING ASPIRATIONS

The vocational aspirations developed by adolescents during this period of self and occupational exploration have been characterized as inconsistent and relatively meaningless by some writers on the subject, and as consistent and meaningful by others. Thus Lehman and Witty (188) found little evidence of permanence of vocational preferences in a study covering ages eight to 18. Schmidt and Rothney (280) more recently found, in the Wisconsin Guidance Study, that only 35 per cent of high school students are consistent in their vocational preferences over the three years of high school, with 67 per cent of this group actually entering the occupation within six months after graduation; 14 per cent were consistent over the last two years of school but not all three, and of these 42 per cent entered the occupation; and finally, 52 per cent were inconsistent over the last two years of high school, "not consistent enough for planning." Sisson (288) earlier reported that far more students entering Wesleyan College planned to enter the professions than actually did. On the other hand, Porter (250) found that the vocational preferences, plans, and choices—jobs actually obtained six months after graduation—of high school seniors were highly

consistent, and Hartson (138) ascertained that the vocational preferences of high school seniors are distinctly related to their preferences during the senior year in college and to later occupational histories.

At first thought these conflicting findings seem utterly incompatible. But studies such as those by Trow (337), Gilger (120), and Porter (250) have made it clear that the form of the question asked determines the degree of realism in the response. Data reported in a doctoral dissertation by Brochard (48) have, in showing that the prestige attached to occupations by subcultures or social groups varies with the conditions in which the groups live, suggested that the frame of reference used by the respondents also affects the degree of realism in their answers.

It thus seems likely that the questions in studies like those of Porter and Hartson were so phrased as to obtain more realistic responses than were those used in studies such as those of Lehman and Witty, Sisson, and Schmidt and Rothney. Furthermore, the treatment of the data makes a difference. If a very refined classification of preferences and of actual occupations is used, the differences necessarily seem greater than when a coarser classification by occupational families is used. The latter is probably the most appropriate method in view of the multipotentiality of people and the similarities of occupations.

Finally, it also seems likely that the context in which the questions were asked in the studies giving favorable results was such as to elicit more reality-oriented responses, as Dresden's discussion suggests (90). Some data bearing on this interpretation have been provided by a study by McArthur (200), who found that the vocational preferences of Harvard men who came from private schools (and hence upper middle and upper class families) were more closely related to their subsequent careers than were their interests as measured by an interest inventory, whereas in the case of Harvard men who had graduated from public schools (from middle and upper middle class families), the vocational interest inventory gave better prediction than did vocational preferences. The reason lies apparently in the frames of reference. The upper class men could express preferences only in terms of the realities of family-approved and sponsored occupations, such as lawyer and executive. They have what McArthur calls "responsive careers," regardless of their interests. The more freely mobile middle class men's interests led them in due course into occupations which were not necessarily those which they thought they preferred while in college and before they had finished exploring an expanding world of work. They have "ambitious" or self-realizing careers in which interests and values are major determinants.

A CASE STUDY IN EXPLORATION: CURRICULAR AND OCCUPATIONAL

The exploratory activities of adolescents involve, we have seen, self-exploration and occupational exploration. The latter includes both finding out about types of careers and finding out about the kinds of education which prepare for these occupations. The case of Marjorie Miller, described in *Appraising Vocational Fitness* (313:592–595, 609–611, 630–633), provides a good illustration of the processes by means of which adolescents learn to understand their own aptitudes and interests, together with the educational and vocational outlets which are appropriate. The use made, in Marjorie's case, of vocational and educational counseling, of curricular offerings, of leisure-time activities, and of part-time and summer work experience, is instructive. The case material is therefore reproduced here, with concluding comments pointing up the use made in her case of exploratory activities.

Marjorie was sixteen years old when counseling began. She was then an academic high school senior, in excellent health, of average height and weight, very good looking, friendly, and mature in manner. She reported that she liked chemistry, languages, and history best, and had no special dislikes in school. Her leisure-time activities consisted of photography, dramatic club, work on the school paper, scouts (Mariner, in charge of younger troop), participant sports, dancing and painting; in this last connection, she had entered some of her work in local exhibits. Her reading consisted largely of school-required books. Her part-time and summer work experience consisted of selling Christmas cards and working in a gift shop.

This pupil's father was employed as an executive by an insurance company; the mother was a housewife; there were no brothers or sisters. Marjorie's plans were to go to a liberal arts college, but in doing so she wanted to "specialize in some definite subject so as to be ready to work" after graduation. She was considering two nearby colleges of good but not outstanding reputation, neither of which was actually a liberal arts college but both of which had good professional and business curricula. Her occupational preferences were chemical research ("I think I would like the work"), dietetics ("I like the subject") or the teaching of chemistry in high school or nursing school ("If I had to teach, I would want it to be chemistry"), but she was undecided as to her actual choice. She had previously thought of art, surgery, medical laboratory work, and tearoom management, in that order, beginning in the last years of grade school. Ten years hence she wished to be "connected in some way with science or medicine."

The high school record showed that Marjorie had done uniformly superior work.

TABLE 5. GRADES: MARJORIE MILLER

Subjects	9th Grade	10th Grade	11th Grade	12th Grade to date
English	91	88	90	92
French			93	90
Latin	94	94	94	
History	Ancient 94			U.S. 90
			Rev. Geom. 91	
Mathematics	Algebra 88	Geometry 87	Rev. Math. 85	Sr. Alg. 85
Biology		94		
Chemistry			90	
Art	91	91		
Typewriting			80	
Physical education	88	91	95	

Her grades were close to or above 90 in all subjects except for 85 in Review Mathematics and Senior Algebra and 80 in Typewriting. The only patterning revealed is perhaps slightly less strength in mathematics than in the more verbal subjects. She said "I would rather spend time on chemistry than on any other subject. I am interested in math but find it rather hard. I have never taken social studies [this despite a current course in history] but I'm sure I'd like them." The principal described Marjorie as "a brilliant girl with unusual ambition, with many interests, particularly in science." Marjorie's test profile, obtained during the first semester of twelfth grade, is reported in Table 6.

The statement of the problem as seen by Marjorie was to choose between dietetics and chemical research, to decide what kind of training to get and where, and to find out more about the kinds of jobs that might be available to her after completing college.

The Counselor's Appraisal. Marjorie's scholastic aptitude tests indicated that she would probably stand in the top quarter of a typical college freshman class, although they did not justify the principal's characterization of her as "brilliant." Her vocabulary and reading scores suggested that this characterization might be based in part upon unusual ability to put her aptitudes to work, for her reading speed was decidedly superior to her scholastic aptitude and even to her vocabulary level. Marjorie was not outstanding on the social studies achievement test, in which subject she had had little prep-

TABLE 6. TEST PROFILE: MARJORIE MILLER

		Norms	Percentile
Scholastic aptitude	A. C. E. Psych. Exam.	Coll. Fresh.	72
	Otis S. A. I. Q. 124	Students	87
Reading	Nelson Denny: Vocab.	Fresh.	80
	Paragraph	"	96
Achievement	Coop. Social Studies	"	59
	Coop. Mathematics	"	90
	Coop. Natural Sciences	"	70
Aptitudes	Minn. Clerical: Numbers	Clerical Workers, F.	57
	Names	"	34
	Minn. Paper Form Bd. Rev.	Coll. Fresh.	70
Personality	Calif.: Self-Adjustment	"	80
	Social-Adjustment	"	40

Vocational Interests

	Allport-Vernon Strong	Percentile		Allport-Vernon Strong	Percentile
Biological sciences		90	Domestic		
Physician	B+		Housewife	A	
Dentist	B				
Nurse	A		Business contact		
Artist	B—	7	Life insurance		
Math-science teacher	B—		Saleswoman	C	67
Social sciences		35	Literary		
Y.W. sec'y	B		Author-journalist	C+	
Social worker	B—		English teacher	C	
Social science teacher	C		Lawyer	C	
			Librarian	C	
Business detail			Femininity	72nd Percentile	
Office clerk	C+		Political (prestige)		47
Stenographer	C+		Religious		92

aration, and only moderately superior in the natural sciences which appealed to her, but this latter may have been due to not having included physics in her program. Her mathematics achievement was very superior. In general, these data were in keeping with the school grades, which we have seen to have been superior; but the trends were reversed, for her mathematics grades were slightly inferior to those in verbal subjects.

Marjorie's perceptual speed, when working with clerical symbols, was in the average range for clerical workers, her standing on the numbers test being high average and on the names test low average. Her score on the test of ability to visualize spatial relations was only moderately high for college freshmen, and would therefore not be outstanding when compared to scientific workers. It seemed high enough, however, to warrant no special consideration if other things were favorable.

The personality inventory scores revealed nothing of significance. Her interests, as measured by Strong's Blank and the Allport-Vernon Study of Values, seemed to be concentrated in the scientific field, with some signs of interest in the social and religious fields. They were quite feminine, and although she did not have much in common with office workers who tend as a group to make high housewife scores, her interests did resemble those of housewives. It seemed worth noting that her highest scientific interest score was as nurse, which hardly belongs in that group and which is heavily saturated with the interest factor which is most important in housewives. She had stated that she thought she might eventually marry, but this thought seemed to play no part in her vocational planning.

Marjorie's school and leisure-time interests did not do much to weight the balance in the direction of either scientific or social interests. Her favorite school subjects included chemistry, languages, and history. Her activities encompassed not only photography, but also the school paper, scout leadership, drama, and painting.

Marjorie's expressed ambitions were in the direction of natural sciences, in keeping with her measured interests, tested achievement, and some aspects of her school and recreational record. The counselor was inclined to give more weight to these factors than to the secondary interest pattern in social welfare work, the social welfare and literary activities, and the achievement in verbal subjects in school. He concluded that Marjorie would be wise to go to a liberal arts college where she would still have opportunity to explore both the social welfare and the scientific fields in courses and in activities. He thought that it would be well for her to select a college which had strong offerings in the natural sciences so that if she did choose this field she would be able to prepare for it as well as her abilities and drive warranted. It was the counselor's opinion that Marjorie would probably become a medical laboratory technician, dietician, or high school teacher of science.

The Counseling of Marjorie Miller. The counseling of Marjorie Miller was done in a situation in which one or at most two interviews were customary, case material being worked up ahead of time and discussed in a factual manner with the student. During and especially after the review of

the data by the counselor, in terms of their actuarial significance for educational and vocational choices, the pupil had opportunity to react to them and to discuss them. The counselor then attempted to help the client understand his reactions, see the implications of the data, and consider possible lines of action. He drew on whatever informational resources were needed and available in order to help with the pupil's orientation. In Marjorie's case the review of the data seemed to bring out little that she did not realize, although the objective and actuarial form in which they were presented impressed her, as might a view of oneself in a mirror for the first time in one's life. The possibility of keeping her program broad for the first two years of college and still finishing with a vocationally usable major had not been known to her; when this was mentioned, she suggested that she might then do well to continue to explore both the scientific and the social fields before making a decision.

Marjorie then raised the question of which college, as those she had been thinking of, rather vaguely, did not offer genuine liberal arts programs but instead specialized from the freshman year. The counselor mentioned several colleges of the type which he thought might be appropriate to her, and asked Marjorie if she had ever thought of any of them. Finances appeared to be a problem. The counselor had made note of some scholarships for which students might possibly apply, one of them being a very desirable scholarship offered by a first-rate college and limited to girls from her part of the state. Marjorie wondered whether she could qualify for such a prize. The counselor, knowing the standing of some girls who had previously been awarded it, said he thought she might and encouraged her to apply. She decided to do so, although she could not afford to go to that college without financial aid. There was some discussion, also, of ways in which campus activities, courses, and summer vacations could be utilized by Marjorie to get a better idea of the direction in which she wanted to turn when she came to the fork in the road.

Subsequent History. Marjorie carried out the decision reached with the aid of the counselor and applied for the special scholarship at the high-ranking college. Drawing on the diagnostic data made available by the counselor, the principal gave her an extremely favorable yet objective recommendation. She was awarded the scholarship, which provided all she needed to supplement her family's financial backing for her four years in college. At the end of her freshman year the counselor had a letter from Marjorie, expressing her appreciation of the educational experience which he had helped her to obtain, and describing some of her reactions to her first year. Apparently her horizons had been so broadened by the experience that she

felt gratitude to the counselor for having made her aware of the advantages of the type of college she was attending and for having found a way to make it financially possible. The next contact came at the end of Marjorie's college career, when the counselor received an announcement of the graduation ceremonies in which Marjorie was to participate. The third follow-up was made through one of the college personnel officers, a year after Marjorie had graduated and six years after the counseling took place.

Marjorie's freshman program in college included chemistry, economics, English, and German. Her grades for the year were C, C, B and B, respectively. Her college personnel record showed that her goal, at the beginning of this year, was "nutritionist, chemist, or social worker." Late in her freshman year she discussed her choice of major field with a counselor who was impressed by her intelligence, viewpoint, and enthusiasm. She talked also with the heads of the science departments in which she was most interested.

During her first summer vacation Marjorie worked as a sales clerk in a department store, and acted as head of the department in which she worked. Her employer reported that "Marjorie has better than average intelligence, good initiative, and excellent character. While at work in my store she handled selling duties very well although she had had no previous training in this field. She is ambitious and would succeed in any work which she undertook."

In her second year in college Marjorie apparently shifted from her former scientific inclinations and majored in child study. She took four courses in this subject, continued economics and German, and added physiology and psychology. Her marks for the year were all B+ or B. She continued along these lines during her third and fourth years, concentrating more and more on psychology and child study. Her marks improved steadily, and she graduated 85th in a class of about 250 students.

Marjorie's extracurricular activities consisted of working on the college newspaper, as a reporter during her first year and as assistant managing editor of a new and rival publication during her sophomore year. She was an officer, and ultimately president, of a campus religious organization. She served as co-editor of her class yearbook in her senior year.

In her last summer vacation Marjorie took a position as a playground instructor in one of the large cities, receiving ratings of "excellent" in industry, ability, attitude, and attendance. She also did field work with children in a local settlement house as part of her academic work during the year. Her supervisor's report read: "She showed a fine understanding of the needs of individual children, was responsible for completing tasks assigned to her, and showed initiative in many situations where students frequently wait for direc-

tion. She has a friendly personality and adjusts easily to new situations." Another supervisor spoke of her "good sense of orientation, quick grasp of problems. What is more, she showed good intellectual and emotional insight into the life of children."

When Marjorie registered with the placement office during her senior year she stated that she wanted to teach in a public or private nursery school. In a later contact she expressed the same interest, but hesitated about applying for specific openings because she was thinking of marrying soon and really wanted a job more than a career. A little later she expressed an interest in an opening as a field secretary for one of the scouting organizations, had an interview with a representative of the national office, and was employed in a branch near her home town.

A final follow-up revealed that Marjorie was doing well in her work, found it very satisfying, and had been promoted to a more responsible position in the same organization. Although she still had marriage in mind, it had receded into the background at least temporarily, and she looked forward to continuing in the same work for the foreseeable future.

Validity of the Appraisal. Marjorie's grades in college were in line with the counselor's expectations when he disagreed with the high school principal's characterization of the girl as brilliant. She did prove to be, as he anticipated, a good student in her chosen field, graduating at the bottom of the upper third of her class. It is interesting to note, however, that her work in science and freshman—but not sophomore—economics was only at the C level. Her achievement in the more verbal subjects was better than that in the more quantitative, as suggested by the analysis of her school grades. This trend was not, however, clearly foreshadowed by the test scores.

Of major interest is the predictive value of the interest inventories. These, it will be remembered, showed dominant interest in the scientific fields, with some signs of interest in social welfare and religion. Her school and leisure-time activities did not do much to decide the issue one way or the other, as they included scientific and social interests. The subsequent history showed that, contrary to the counselor's expectation, the secondary social welfare interest pattern became stronger as time went by. It has been seen that Marjorie carried out the program of exploration in both scientific and social areas which the counselor had recommended for her freshman year and that, whether because of interest, aptitude, or some combination of the two, she then focused entirely on the social welfare field.

The counselor's private opinion, then, which he did not let influence his counseling, was mistaken. He had thought that exploration would confirm Marjorie in her adolescent choice of a scientific occupation, whereas in fact

she decided to prepare for and actually entered a social welfare occupation. Stated as flatly as this, the outcome might lead one to conclude that the test results had actually been misleading in this case. But reconsideration of the data will reveal that the basis of Marjorie's subsequent actions can be seen in the high school counseling record. Subordinate though the trends seemed to the counselor at the time, there were indications of social welfare interests. Isolated from the rest of the pattern these indices are rather impressive:

Unusual reading speed;
Verbal grades superior to quantitative;
Secondary social welfare interest pattern;
Feminine (i. e., social and literary) interests;
Active on school paper;
Dramatic club member;
Scout leader.

The foundations for the choice of a social welfare or literary occupation were clearly there. It was only the more dominant interest in science supported by superior achievement in the sciences and equally important scientific avocations which led the counselor to believe that success and satisfaction were most likely to lie in the applied sciences.

Perhaps the principal conclusion to be drawn from this case, however, is that even in the case of some well-motivated, clear-thinking, able high school seniors, interests and abilities are still in the process of developing or, at least, of coming to the surface of consciousness. When more than one pattern of abilities and interests is noted, it is therefore wise for the student to plan a program of study, work, and leisure which provides for further exploration of the two or three dominant patterns. The diagnostic process may serve to reveal areas in which exploration can best be concentrated, and counseling may have as its function the planning of appropriate types of exploratory activities. Actual decision making may not come for some time, and then it will turn out to be a step-by-step process rather than an event. This is not only because of the need, felt or otherwise, of the adolescent to pursue the process of self-exploration further before committing himself, but also because his limited horizons make it necessary for him to obtain a better understanding of what the world has to offer.

Marjorie had grown up with the idea that scientific careers were the most to be respected. Her idea of becoming a surgeon came from an uncle whom she had long admired and who was respected by her whole family for his attainments. Having no brothers, in a status-conscious family of executives and professional people, she had grown up overtly identifying with and at-

tempting to meet the role expectations of men, as her vocational aspirations showed: *chemical research* ranked highest (a dual, masculine and feminine occupation which she believed to be more open to her than medicine); failing that possibility, *dietetics* was a second choice (a more purely feminine occupation, but still satisfactorily scientific); and failing these, *teaching* was a last resort (also feminine, but if she "had to teach," she "would want it to be chemistry" and thus be both feminine and scientific). But Marjorie's feminine self was beginning, even in high school, to manifest itself. Her high housewife and nurse scores on Strong's Blank, her social welfare interests on the same test, her social and literary activities, and also her shift from surgery to the vocational objectives named above reveal this shift from masculine-scientific to feminine-helping occupations.

The counselor's recognition that something like this might be taking place led him to help Marjorie understand what might be happening. With this orientation, he was able to help her see the need for further exploration, to help her plan an educational program which would keep both avenues of development open to her for some time, and to incorporate in her plans experiences which would help her to test both her old self-concept and the new self-concept which seemed to be emerging. Experience showed that the emergent picture of herself was the more valid self-concept, and helped her to implement it in social group work.

7

THE TRANSITION FROM SCHOOL TO WORK: REALITY TESTING

Adolescent exploration is a process of reality testing. It begins in junior high school, continues throughout high school, and goes on also in the various nonschool activities in which teen-agers engage. It is, however, when the youth begins to look for a job, it is when he must demonstrate that his abilities, skills, and knowledge are worth paying for, and that his notions as to the kind of person he is and the kinds of things he can do are well founded, that the crucial test is met. An understanding of the nature and scope of the problem of making the transition from school to work is therefore essential to educators and counselors of youth.

Cultural Adaptation. In growing up, in short, an adolescent makes what sociologists have tended to view (217, 241) as a change from one subculture to another. He leaves the society of youth and moves into the society of adults. While this goes on gradually during the high school years, it happens suddenly when he leaves the school for the office, shop, factory, or fields. In high school and college youth predominates, it sets the pattern and the mode, it tends to disregard and even to look down on the opinions and values of the adults with which it comes in contact. In the workaday world, however, adults predominate, despite the fact that some 1,750,000 young people enter it each year. The adolescent who attempts to enter the world of work therefore finds that he is now in the minority. Not only is he a member of a minority, but he finds that the working world—the adult world—has mores and attitudes with which he is not familiar, and that his past ways of achieving recognition are not as effective in this society as they were among teen-agers or in the mixed adult-adolescent microcosm of the family. The exploratory activities in which he engaged while in high school did not fully prepare him for this, especially if he never held a vacation or part-time job.

In the home and school, for example, he found that he was automatically a group member. Even if he was something of an outgrouper, an isolate, at home or at school, he still had some claim on the institution: he was his parents' child, he was a student in the school, for punishments if not for rewards. But in the adult world no one claims him: no factory has to hire

him, no office has to consider his application for a job. Even his home may make him feel that he does not belong, especially if there is domestic discord or financial trouble. The adult can leave, and no one really cares; the adult can be refused a hearing or fired and he has no recourse—unless he is already a union member or has a fair employment claim.

In the home and at school the attitude is typically that one should help: sympathetic co-operation is the ideal, a degree of helpfulness is the practice. But in seeking employment, in holding a job in the adult world, each one looks out for himself. Competition is the keynote, sometimes appropriately qualified as cutthroat. Co-operation exists, of course, but it is the exception rather than the rule.

Other differences in the values and associated mores of the adolescent and adult worlds have been pointed out. Miller and Form (217), for example, contrast the uniform morality of home and school with the ethical neutrality of industry. They compare the self-fulfillment tradition with that of living up to commitments "no matter what," and they contrast the equal worth of individuals with the differences in values placed upon persons in the world of work.

Changing cultures is difficult. Although, as has already been pointed out in Chapter 6, some studies (99) have shown that the "myth of adolescent culture" has been exaggerated, genuine differences in adolescent and adult subcultures do exist. The adolescent who is just out of school is really in neither the adult society nor the adolescent: like the Pan Twardowski of Polish pantomime, he is neither good enough for Heaven nor bad enough for Hell, but finds himself suspended in between. Adjustment involves learning the ways of the new subculture, internalizing its dominant values. But, as a member of a minority group and feeling somewhat strange and out of place, the youth finds it doubly difficult to perceive and learn the ways of the new culture. The young worker who, at the clerical and semi-skilled levels entered by most youth leaving school, is today better educated than his seniors, finds that his more prolonged education is a cause of distrust on the part of older workers. Getting the least interesting jobs and the lowest pay when he does begin to work, he feels discriminated against. Advancement seems slow and grudging, and the means to it are obscure to him. He finds that when he breaks the rules by being absent without reason or by back talk, authority has more power, punishment is more sudden and more drastic than at home or in school. He wants to rebel, but does not know what to rebel against, for self and society are abstractions with which he is not used to coping—and so he flounders.

Becoming a Worker. In the process of floundering in the labor market the

adolescent in due course obtains a job. In periods of full employment he may have it promised him before he leaves school, and in depressions he may go jobless for months or even years. In either case a certain amount of floundering is likely, whether it be in getting or in holding the job. Let us look, first, at getting a job. In the next two chapters we shall examine the other aspects of the process of becoming a worker.

Getting a job is done in a variety of ways, but the most common method is through contacts (206:130–140; 230:123; 239:162–165). The youth's father, brother, or neighbor knows about an opening and tells him about it so that he may apply, or this same adult speaks to his own foreman about the job seeker and gets the suggestion that he send the youth in for an interview. Perhaps a teacher at school takes an interest in the recent dropout or graduate and calls a possible employer about him, then makes the introduction.

The second most common method of getting a job is by direct application. The job seeker applies at the factory gate first thing in the morning and is told to report to a particular foreman who needs a boy, or he goes to the personnel office to see if there are any openings and finds that this time he is lucky. Sometimes direct application is done on a hit-or-miss basis, by "making the rounds" of employers; sometimes it is carried out as a result of the reading of news items which tell of expanding enterprises, or the study of want ads, or the suggestion of a friend who believes something may open up in a particular company. Finally, of course, employment agencies place many people on jobs, youth being served more effectively, as a rule, by the state employment services and community agencies with social service backing than by fee-charging agencies which tend to specialize in more well-defined and more lucrative jobs than those for which beginning workers qualify.

Since most jobs are obtained through contacts and through direct application, most beginning workers are limited to jobs at their parental socioeconomic level. This is one reason why fathers and sons tend to have jobs which place them at the same level: the job-getting resources of the son are limited to the father, relatives, and neighbors (96), all of whom tend to be at about the same occupational level. The vocational plans and first jobs of American high school seniors resemble the occupations of the fathers more closely than they do the occupations appropriate to the boys' intelligence (250). It is only through the mediation of the school and of employment services that young people actually have opportunities to find outlets which are appropriate to their abilities and interests when these are not like those of their parental social status group. Hollingshead (151) has well illustrated the way in which parental social status limits the job opportunities of youth in a

static community. It is not to be wondered at that many beginning jobs prove to be unsuitable, and that turnover is high, when placement is based more on propinquity than on the aptitudes and interests of the applicant.

When the young job seeker has some specialized aptitudes and interests, when he understands these and translates them in terms of a fairly definite goal, he is in a position to focus his job seeking and to present himself to prospective employers in a more favorable light than most young applicants. If the adolescent's self-concept is well developed and realistic he sees a place for himself in the adult world, he can discuss himself and the opening he seeks in terms which are meaningful to the employer and which show the employer that he is indeed ready to assume a place in the world of work. Such adolescents are equipped to find employment opportunities which are not limited to those their parents and their parents' friends open up for them: they are, in fact, occupationally and socially mobile. They are not likely to flounder in the labor market. It is the youth who leaves school with his concept of self ill formed, or relatively untested by reality, who finds it difficult to get a job, and particularly to get a job which is likely to afford him appropriate outlets for interests and abilities.

The Jobs Young Persons Get. Realistic attitudes toward the world of work, and especially toward the place a young person may expect to find in it, are based partly on knowledge concerning the kinds of jobs young people leaving school and college do typically obtain. What is typical varies, of course, with economic conditions and social trends, with localities and their differing types of employing enterprises. As representative as any are data collected in an eastern city in a period of moderate prosperity. Data collected in the

TABLE 7. JOBS HELD ELEVEN MONTHS AFTER LEAVING HIGH SCHOOL

Occupation	Boys		Girls	
	Number	Per Cent	Number	Per Cent
Professional and semi-professional	21	2.0	6	.5
Managerial	7	.5	1	—
Clerical and kindred	238	19.0	409	27.0
Skilled	116	9.0	13	1.0
Semi-skilled	398	31.0	222	15.0
Unskilled	21	2.0	27	2.0
Service	61	5.0	112	8.0
Agricultural	19	1.5	1	—
No job or no answer	385	30.0	681	46.5
Total	1266	100.0	1472	100.0

spring from 2,738 boys and girls who left or graduated from school the preceding summer are presented in Table 7 to show the types of jobs obtained.

Table 7 makes it clear that the largest single entry job category for boys is the semi-skilled, for girls the clerical; second for boys is clerical, for girls semi-skilled. No other group is of appreciable size, except for some boys in skilled trades and some boys and girls in service jobs. Another way of putting it is that four boys in five get blue denim jobs, while one girl in four finds white collar work. In a rural area, of course, more would have been engaged in farming. When the graduates are separated from those who dropped out of school, it appears that the former are more likely to have clerical jobs, the latter to have semi-skilled and service jobs.

A study of college graduates made during a similarly prosperous period (28) may be compared with this study of high school students in order to see how the more highly educated group fared. Nearly 13,000 graduates of some 1,100 colleges were followed up, and the jobs of those who were under 30 years of age are given in Table 8.

TABLE 8. JOBS HELD BY RECENT COLLEGE GRADUATES

Professions	Men	Women
	%	%
Education	18.2	62.9
Medicine and dentistry	7.1	4.1
Sciences	12.6	2.5
Law	6.1	—
Government	6.3	5.0
Ministry	1.6	—
Arts	3.2	1.7
Total professions	55.1	78.6
Business		
Manufacturing	15.6	—
Merchandising	11.7	6.9
Finance	10.8	3.3
Transportation, utilities	3.0	—
Farming	1.0	—
Production	1.6	—
Miscellaneous	1.2	11.2
Total business	44.9	21.4

This table, from the study of Haveman and West (140), brings out the fact that college men have something of a tendency to enter the professions, although almost half enter business, while college women who enter the labor market tend heavily toward the professions. Education absorbs nearly two-thirds of the women graduates, although there is reason for thinking that continuing prosperity and the shortage of trained men in some fields has since opened up more positions for women in other professions. The women not in the profession of education are scattered through a variety of fields. Education absorbs more men than any other profession, but less than one-fifth of them. The scientific professions, including engineering, account for almost as many, and the trend is for these occupations to absorb an increasing proportion of young men. Among the business occupations, the manufacturing, merchandising, and finance fields take more than a third of the college men, each of them approximating the numbers absorbed by the scientific professions. Medicine, law, and government take much smaller numbers. When college dropouts are compared with graduates (235), the former are found to be more frequently in clerical, skilled, retail, and semi-skilled occupations.

DISCREPANCIES BETWEEN ASPIRATIONS AND ACHIEVEMENTS

The discussion of the jobs young people get leads to the question of how well these correspond to the jobs they want. It would perhaps be more logical to treat the topic of discrepancies between aspirations and achievements in a later chapter, in connection with adjustment to the job and advancement in the world of work, but it may be more meaningful to deal with it here, as we survey the types of work actually obtained in entering the labor market.

The causes of the discrepancies between aspirations and achievements in our culture seem to lie in the American tradition of getting ahead, in the occupational expectations which are associated with class membership, in undue expectations of education, and in changes in the structure of business and industry.

The self-improvement tradition goes back to the very beginnings of the American colonies, for self-improvement was one of the prime motives of the early settlers. The Virginia colonists were seekers of fortune, and while the Puritans of New England and various later religious groups had genuine religious reasons for coming to the New World, the close tie between the religious and economic motives of Protestantism has been well documented (329, 354). The New World was, for succeeding generations of settlers and

immigrants, the land of opportunity, a place in which to seek a better life than they had known in Europe. And the quality of life, in a civilization which was being built on the edge of the wilderness, was not unnaturally judged by many in terms of material things. Prestige accrued to the tamers of the wilderness as the frontier moved westward. In this respect the New World was, of course, not radically different from the Old World of which it was a "plantation."

One important manifestation of the importance of the self-improvement tradition is in attitudes toward leaving home, moving to another community, and leaving one's kin. In Europe it has proved very difficult to get Welsh miners, for example, to move from one valley in which the mines could no longer economically be worked, to another valley where the desired employment as miners was available for them. In some of the older seaboard communities of the Deep South men not infrequently turn down better job offers which would take them to other cities in order to remain in the home community to which they are bound by close ties of kinship, friendship, and tradition. But in the newer cities of the Middle West and West people frequently uproot themselves and their families to move to distant pastures which seem greener. The frontier tradition is still strong, geographic mobility is seen as a key to occupational and social mobility, and the self-improvement drive is widespread.

Parents and teachers tend to aid and abet the desire to rise in the world. When interviewed about their aspirations for their children, parents indicate that they want their children to have better jobs than their own, to have an easier life than they had themselves. As one semi-skilled worker put it, "I don't know what job I want him to enter. He can decide that. But I want him to have a better job than mine. I don't want him to have to go through what I have." Such aspirations are common among semi-skilled and unskilled workers, for their own occupational horizons, as Reynolds and Shister showed (257), and Parnes (239:165–174) has made clear, are too limited for them to know what occupations would be better: all they can specify is "something better." Skilled and white collar workers, on the other hand, are closer to professional and managerial occupations, have a better knowledge of what they involve, and hence are better able to indicate the specific profession of "better" type of work they would like to see their children enter.

Teachers play a similar role for similar reasons, for teaching is essentially a poor man's profession. Like nursing, its training institutions are numerous and training is inexpensive as professional training goes. As in the case of nursing, there is a high turnover rate due to the large number of women who

marry and leave the profession after a few years of work. And, since the pay scale is lower than in most professions and in most business occupations requiring similar levels of ability and education, there is a constant need for new recruits to replenish the ranks. The end result is that teaching attracts a large percentage of its recruits from the middle, lower middle, and upper lower classes, to use Warner's classification. Many relatively unprivileged but not underprivileged persons see in teaching an inexpensive avenue to advancement, an avenue in which ability rather than contacts and capital open the doors of opportunity. Making sacrifices, then, in order to obtain an education, enter a profession, and enjoy a richer life, they tend to uphold education for others as the means of obtaining the good things of life which they have obtained. It is only human to expect others to value that which one values oneself. The child who does not value an education, who does not want to "better himself" by rising to an occupation higher than that of his parents, is likely to be viewed askance by his teachers.

The occupational expectations which are associated with class membership, or, to put it more precisely, with social status, are a second cause of aspirations which do not coincide with achievements. Parents, friends, and the individual himself tend to think of the child as starting out where his parents are at the time of the child's adolescence. Thus the adolescent son of middle class parents wants, on finishing school or college, to be able to live on the same scale on which his parents are living, whether or not he wants to rise to a higher scale later. Daughters who marry want to live "according to the manner to which they are accustomed," namely at the parental level, even though the parents may have started married life at a lower standard of living themselves. For example, it is not uncommon to find the grown-up children of middle class or well-to-do suburbanites complaining that they cannot find places in which they can afford to live in the communities in which they were brought up, that instead they have to live in nearby, less exclusive suburbs in which they can afford to rent or own a house. In due course, as they advance in their occupations, these same people drift back into the parental suburb or move to a better one. When the abilities, interests, or economic resources of the individual are not such as to make possible this ultimate return to the parental standard of living and social level, the discrepancy between aspiration and achievement becomes something of a sore point.

Undue expectations from education are another common cause of discrepancies between aspirations and achievements and of the resulting frustration. The educational system is viewed by many primarily as the ladder of self-improvement, and "self-improvement" is interpreted not as improving

the psychological self, but one's material and social status. The tradition of "start at the bottom and work up" has been balanced by the tradition of "go to high school (or college) so you can get a good job." But when the average adult has completed ten years of schooling, when the majority of young people of high school age stay in high school until graduation, and when as many as twenty per cent of high school graduates go to college, education as represented by a diploma is no longer a mark of distinction. It is no longer the magic key which unlocks the door to opportunity. It may be a *sine qua non* for entry into many fields, such as managerial and professional occupations, but it does not guarantee admission to them.

Changes in the structure of industry are a final cause of aspiration-achievement discrepancies. These changes consist of a breaking away of some of the rungs of the occupational ladder, of an increasing gap between blue denim and white collar occupations (166, 194, 195). The ladder to advancement in industrial technology, for example, used to be through an apprenticeship in a specialty such as that of machinist, to the job of journeyman machinist, up through the position of master, to that of millwright, and eventually to that of mechanical engineer. But today engineers are all college trained. So the skilled machinist cannot rise from the blue denim to the white collar part of the occupational ladder. This is true of many other fields, so that the increasingly large population of semi-skilled factory workers finds itself unable to advance to more responsible types of work through the channels of promotion. They may become foremen, but there the ladder would end were it not for formal education. One must have a white collar made of sheepskin to move up to the managerial level.

FACTORS RELATED TO GETTING A JOB

Returning to the topic of entry jobs, it is now pertinent to consider the question of job getting and of the factors which affect it. This is a question which attracts more attention in depression years, when jobs are difficult to get, than in good times when jobs are plentiful and easily obtained, although labor shortages have also attracted attention to factors affecting mobility (237:38–48). It would be important, under any conditions, to know what factors are related to obtaining a satisfactory job, that is, a job in which the worker finds satisfaction and proves satisfactory to his employer.

Intelligence, surprisingly, has little to do with getting an entry job, even in depression years when jobs are difficult to obtain (83). When employers consider inexperienced workers they are more influenced by evidences of maturity, that is, by size and manner, than by intelligence. The jobs they

fill with school leavers tend, in any case, not to be such as to require high levels of intelligence, and the evidence of high school graduation is considered sign of sufficient ability.

Education does play some part in job getting. In general, those with more education and better marks tend to get jobs more readily, and those from academic and trade curricula are favored (96). There is a tendency on the part of employers to consider the academic curriculum superior to the commercial, even when filling clerical jobs; and there is a similar preference, in filling semi-skilled and skilled jobs, to prefer the candidate who has demonstrated in his schooling that he is shop and factory oriented rather than office oriented.

Extracurricular activities also are related to job getting, in work in which ability to meet and work with people is considered important. A record of participation in clubs and activities is seen as evidence of skill in working in groups, of leadership ability. It helps in getting sales, junior executive, and educational positions.

Work experience, as brought out in the previously discussed comparison of graduates of a co-operative and of other liberal arts colleges during a period of depression, is an asset in job seeking. In the new graduate, summer or part-time experience is viewed as evidence of knowing something of the ways of the world of work, of responsibility and dependability. It is, the employer believes, easier not to have to break in a "green" worker.

Personality, which in employment work seems to be definable only as ability to make a good impression, also affects job getting. This is of course circular reasoning, since making a good impression means only that the favor of the employer is won, and winning the favor of the employer can be operationally defined as getting a job. The real question is, what helps to make a good impression? Analyses of employment interviews show that different interviewers are impressed by different characteristics, and again we end up with a circular definition: the characteristics which make a good impression are the characteristics which the interviewer likes. There is, clearly, not much help to educators, counselors, or job seekers to this approach to the question, although there is some agreement as to likes and dislikes.

Contacts, as has been seen in connection with job-seeking methods, are a major means of getting jobs. This means, then, that those who get jobs are most likely to be persons who know people who know where jobs are, and who can introduce them to persons who employ workers. Since the sons and daughters of executives and foremen are the young people who know people who know people who hire people, it follows that they find it easier to get employment than do other young people. This is a hard fact to face in a

democracy, but it is not necessarily to be interpreted as a sign of lack of democratic intentions: it is simply evidence of the undemocratic effects of social structure. When a major study of the character of public education (96) showed that most high school students actually knew no adults other than their close relatives and their teachers, and that those who did know some adults tended to know only friends of their parents, this was interpreted as evidence of a need to help these young people to broaden their contacts with adults. The schools and employment services thus have as one of their principal functions the increasing of social mobility through the facilitation of occupational mobility, through effective vocational guidance and placement programs.

Vocational guidance emerges, then, as a final factor related to getting a job, and particularly as a factor related to getting a satisfactory job. The fact that Antioch College employs staff members whose function it is to help students learn from their work experience may be one reason why Antioch students had better depression employment records than other liberal arts graduates, even though the work was not planned for vocational exploration or training. The fact that vocational counseling reduces changes of major field, that is, makes it easier for students to move directly toward an occupational goal (360), is apparently a related finding. That vocational counseling on the basis of psychological tests results in better employment records—as shown by stability, promotions, earnings, and employer ratings—and in a higher level of job satisfaction than does vocational counseling without test data, and that those who carry out plans made in counseling are more successful than are those who do not, has been demonstrated in a number of studies (25, 160, 165).

From the above facts it may be inferred that intelligence, aptitudes, and interests, understood and taken into account in job seeking and placement, lead to getting better jobs than do these same factors, not understood and neglected. In other words, a well-formulated self-concept, which takes into account the realities of the working world, makes for an easier transition from school to work than does a hazy or unrealistic concept of the self. Here, then, is a major goal for education: the development of clear, well-formulated, and realistic self-concepts.

8

THE FLOUNDERING OR TRIAL PROCESS: ATTEMPTING TO IMPLEMENT A SELF-CONCEPT

The term *floundering* has been used by some sociologists (78) to describe the experiences of young workers who try one job, then another, and then another, sometimes for a succession of five or ten short-lived jobs, each of these jobs having little or no obvious relationship to the others. In such job histories there is a sequence only in the temporal sense, that one comes after another; there is no sequence or progression, nothing in one job that draws on experience in the preceding job or that leads logically to the next. Other writers, in particular Miller and Form (217), have preferred to refer to this process as one of trial, and characterize the first few years of work experience in the lives of most workers as the *Trial Work Period.*

Both terms have their advantages and disadvantages. Floundering well characterizes the lack of sequence, the meaninglessness, the random nature, of the succession of jobs found in the early vocational histories of many young men and women as reported in studies like that of Davidson and Anderson (78). But it obscures the fact that in other instances this succession of jobs is actually part of an exploratory process. It may be inadequately planned, but is nonetheless engaged in by the individual with the idea that he is trying himself out in a field which may interest him, but which, if it proves inappropriate, will be abandoned in the pursuit of interests and opportunities in some presumably more fruitful field. The term trial process, on the other hand, well denotes the exploratory nature of much of this activity, but it fails to make explicit the fact that a considerable proportion of this job movement is not as planned as is implied by the term of trial, is instead random. If the term trial is understood to denote both systematic and random trial, it is to be preferred to the term floundering.

It would be helpful to know to what extent the job changes encountered in the early work history are the rule, and to what extent the exception; to what extent they are random, and to what extent systematic; to what extent time spent in trial jobs is wasted, to what extent well spent; and what factors are associated with randomness and system in the sequence of job changes.

Knowing these facts, it would then be possible to identify those who are likely to flounder, and to give them special help in understanding themselves and the world of work more adequately so that they may handle job seeking more planfully. Those who seem likely to explore or try out a job by working at it might also, if we understood the process well, be given more help in their trial work experiences. We do not have facts bearing on most of these questions, merely somewhat casual observations and clinical data. But, as we proceed to examine what the trial process consists of, how it manifests itself in work histories, and how it comes to an end, we will develop some insights.

FINDING ONE'S PLACE IN THE WORLD OF WORK

The problems of trial and floundering are, in part, problems of job selection and placement, that is, problems of choosing, locating, and obtaining a suitable job. To this extent they resemble the factors related to getting a job, discussed in Chapter 7, but there we were surveying determinants; we were not concerned, as here, with the developmental process. They are partly problems of social adjustment, or of fitting into the social structure of the adult world and of its enterprises. They are partly problems of adjusting to work requirements which differ from the work requirements of home and school. They are partly problems of adjusting to a way of life, the life that one adopts when entering a given occupation.

Job Selection and Placement. Deciding what kind of *job* to look for, whether or not one has already prepared for some *occupation,* is not infrequently a problem for entry job seekers. For a job is much more specific than an occupation: there are several different kinds of accountants—the *Dictionary of Occupational Titles* lists 10— members of the occupation "physician" may be practitioners, researchers, administrators, or even publicists; and sales clerks who work in perfume departments or stores are not interchangeable with those who sell rugs, sporting goods, or liquor. This means that the new entrant into the labor market, the job seeker, must need a rather high degree of self-understanding and/or occupational information if he is to move directly forward in his career, rather than flounder about before getting his bearings.

Self-understanding, despite all of the experiences which contribute to the development of a self-concept during childhood and adolescence, is not easily achieved and is usually limited at best. Changes taking place in the roles of the adolescent as he moves toward adulthood require time for assimilation; some aspects of the self-concept may be in conflict with others, impeding the

process of personality integration. The job seeker therefore has only an ill-formed idea of what he has to offer employers; his lack of self-understanding is a handicap.

Lack of occupational information is another aspect of the problem of job selection and placement. To know one's self, what one has to sell, is important; it is also important to know the world of work, to know what one can do that employers will pay for, to know where people who can do such things are needed, to know how one applies for a given type of job. Finding an appropriate place in the world of work may happen by accident, just as driving from St. Louis to a newly rented suburban house can be done without a map, but in both cases it helps to know where one is going (the job is that of bookkeeper—the house is in Richmond Heights), and to know how to get there (bookkeepers' jobs may be obtainable through the school in which one learned bookkeeping, through the employment service, and through direct application at such-and-such companies—the road to Richmond Heights goes out Lindell Boulevard, etc.). Even those who know what kind of job they want and where such jobs may be found are sometimes handicapped in not knowing how to obtain such jobs. To illustrate with some extreme examples, one does not apply for a semi-skilled job in a factory by mail, for a sales clerk's job while wearing a low-cut dress and jewelry (one personnel manager expressed this by saying "We want the customers to look at the merchandise, not the girls"), or for a professorial job by applying in person at the college president's office. Getting into a satisfactory type of job can be compared to a merchandising campaign: one has to study the market, the various possible consumers and their needs, the ways in which they might use one's product, and the various possible means of reaching and appealing to these possible consumers.

Lack of opportunities or of resources may be another cause of difficulty in getting an appropriate type of work. Knowing what one wants to do and in what kinds of jobs it might be done is not enough: the opportunities must be there too, and the means to seize the opportunity. The would-be businessman must have the capital with which to launch his enterprise, and usually the credit to supplement his capital. This is true of the physician or dentist, too, who knows where he wants to practice, but must have the capital to buy a practice from a retiring practitioner and to set up his own office; lacking this, he may have to give up his desire for a practice of his own, and enter institutional employment. The newly trained craftsman may know of an opportunity to ply his trade in another community, but may be tied by family or health problems to the community in which he lives, may find it necessary to postpone or give up entering his preferred occupation.

Social expectations may place obstacles in the way of wise job selection and placement. The things one would like to do and can do well may not meet the social status requirements which one has set as a result of family background, or may be below the aspirations of family and friends. Thus in one study of job satisfaction (306) there were a number of men who were earning a living in white collar jobs who stated that they would be happier doing skilled work which was related to that which they did in their hobbies; although qualified for such work, they remained in the less satisfying but higher status work in which they were employed. One high school boy, only son of the physician in the small town in which he lived, had considerable mechanical ability but less than the academic ability which is required for success in medical training. The father had always assumed that his son would enter a profession, and particularly hoped that he would become a physician and in due course take over what he liked to think of as the family practice. Social expectations created a real problem in the vocational counseling of this boy, but were happily solved by the boy's attraction to the intellectually less demanding profession of shop teacher and the father's pleasure in discovering a professional outlet for the boy whose poor prospects in medical school he could readily understand even while he disliked admitting them.

Social Adjustment. Finding one's place in the working world is partly a matter of job selection and placement, but it is also partly, sometimes largely, a matter of social adjustment. On the job, there are problems of adjustment to authority in the form of supervisors and supervision, and in the form of the status system, and there are co-workers with whom the lowly beginner must learn to work and play. At the same time, there are demands from the family and home, in fact from three families if the worker is married: his own, his parental family, and his family-in-law. There are also demands from the community in which he lives, demands which vary with the role into which he steps with the aid of his family and with the roles bestowed upon him and which he attempts to assume with his occupation.

Adjustment to authority has been seen, in earlier chapters, to be required in a variety of types of groups of which people are a part. Authority relationships exist in the home, at school, in the community at large, and in the work situation. Wherever there are people, it seems, there are status systems. The patterns vary with the culture, but status structure is always found. In work situations the status system typically involves major categories, such as management, supervision, and labor, otherwise describable as planners, checkers, and doers. This is true whether the work situation is a business or a factory, a construction project or a farm, a mine or a ship, a school or a hospital.

The new worker, even if he is viewed as managerial potential or is employed in a professional capacity, goes to work as a doer in the sense that he does what he is told to do by a more experienced worker, he is dependent upon rather specific orders, and his work is regularly checked to see how well he has carried out these orders. This is sometimes difficult for the new worker to accept, especially if he has just come from the freedom of a campus and the permissiveness of the modern home. Furthermore, close supervision gives opportunities for personalities to clash, while spasmodic supervision breeds misunderstandings. Despite a widespread current interest in its methods and problems, supervision remains an art, and, at that, an art which most supervisors have not studied. With supervision often poor, in a status system which is frequently rigid, and with poorly verbalized but often somewhat negative attitudes toward authority carried over from childhood (108), the new worker finds adjustment to his first job anything but easy. He not infrequently gives up his job and seeks another more congenial place to work or type of work, failing to recognize that it is not the job or the position which is inadequate, but rather his own attitudes toward and ways of handling authority relationships.

Adjustment to co-workers is a closely related process, which also frequently is the focus of dissatisfaction and a cause of job changes in new workers. The new member of the subculture does not easily find his place in the new environment, for even though his work role has been well defined his social role is partly structured by his status as neophyte, and partly unstructured. This creates ambiguities in his mind and in those of others, but only the interaction of personalities can complete the structuring. His coworkers must discover what manner of man he is, and he must make similar discoveries about each of them. After they "have his number" and he has theirs, social roles will be well defined; in the meantime, the lowly neophyte is put through an initiation process so that his characteristics may be brought quickly to light. If he survives being sent on errands such as that of fetching a left-handed monkey wrench or a new front tire, if he does not lose his temper over jokes about his rosy cheeks or soft hands, if he dresses as persons in his station are expected to, if he listens to his elders with interest and asks them occasional intelligent questions, and if he in other ways conforms to group standards, he soon becomes a member of the group and is likely to remain on the job. If he does not, he finds the situation too uncomfortable to remain in and quits to seek work elsewhere, perhaps to seek work of a different type in the hope that it will place him in a more congenial setting. Thus the trial or floundering process goes on.

Family and home demands represent another type of social adjustment

problem which the new worker must learn to handle while getting started in his career. He has, of course, been meeting these throughout his whole life, but the form of these demands changes as he enters adulthood and becomes a wage earner. As a young child, family demands were paramount and practically unrivaled. As an older child and young adolescent the demands of peer group and school are added; while very important emotionally, they have considerably less practical importance than those of the home, which is still paramount. But when the older adolescent goes to work and begins to take on adult responsibilities and values, work demands actively compete with family demands. Work demands combine the strength of psychological forces such as the desire for prestige and belongingness, with that of economic forces such as the threat of loss of income and the rewards of raises and profits. Family demands now have only the strength of psychological forces, such as the need for affection and for belongingness, without, at this stage, reinforcement by economic forces such as the threat of withdrawal of support or of cutting off an inheritance. Home and work compete, sometimes on equal but sometimes on unequal terms, for the time, energy, and resources of the young worker. He may go to night school as completing his apprenticeship requires, or he may cut class and go to a night club with his girl friend. He must decide whether an evening at home should be given to studying for the correspondence course which may bring him a promotion, or devoted to playing cards with the family. He must choose, on his Saturday off, between doing the work which he brought home from the office and repairing the screens which must soon be put up with the advent of warm weather. The joyous, carefree youth is a creature of fiction. In real life, and especially in the working life, he is the victim of strong and conflicting forces, playing conflicting roles as worker and family man and able to renounce neither of them in favor of the other.

While the young worker has his ideas as to how he wants to resolve these conflicts, his parents and later his mate—for the worker may be a man or a woman and in this context the word "his" also means "her"—have their own ideas as to how they should be handled. The overprotective mother may keep her son (or daughter) in their home town, thus denying him advancement. The white collar wife may want her blue collar husband to "get ahead" and therefore support choices favoring his work. The "corporation wife" may, in the tradition of Whyte (357), ably direct the family social life in ways which further the fortunes of her executive husband. The butterfly wife may fritter away her husband's leisure, energy, and funds in frothy social life. The affectionate homebody may keep her husband so happily occupied in domestic activities and projects that he does not discover, until his mid-forties,

that opportunities for advancement have passed him by in favor of co-workers who seemed to live *with* and *for* their work rather than merely *by* it.

Community adjustment is a final type of social process in which the new worker becomes involved in new and different ways appropriate to his status. As a new worker, he is a marginal member of the community. He may, like many other beginners, be a transient. Without a family to support, without a home of his own, paying no local taxes, he is relatively foot-loose and irresponsible. *Older* adolescent and *young* adult, he belongs fully neither to the adolescent nor to the adult subculture. He has not, in other words, a clear and a secure role in the community. This ambiguity is difficult for him and difficult for his friends and acquaintances. He envies the young married couples whom he knows, for they belong at least to each other; they have embryonic homes of their own. The bachelor's freedom which he enjoys at certain times, at other times palls on him. He is jealous of the older workers in the plant, for they have bonds of friendship developed through shared experiences which show in their casual greetings and in their little jokes. It takes time and experience to develop the bonds that unite man and wife, worker and co-worker. And the novice has had neither time nor experience. He has, without really knowing what they are, adjustment problems.

Finding one's place in the world therefore becomes the major goal at this stage. Establishment in work and establishment in a home are important and sometimes competing objectives. The effective handling of one of these adjustments often helps in the handling of the other, because of the freeing of psychological resources from one preoccupation for concentrating on the other (320). Since both needs are basic for men, however, priority can rarely be assigned to one of them, and most men try to handle both types of adjustment, to play both roles, at once. Frequently the professional man, with his choice of interesting work requiring a prolonged period of training, postpones social—including marital—adjustment to maximize vocational. Similarly the semi-skilled worker, with his early attainment of peak wages, sacrifices vocational adjustment to expedite social. Roe's study of eminent biologists (265) lends support to this theory in so far as the professions are concerned. Some behavior scientists refer to such behavior as the postponement—or non-postponement—of gratifications (174). It is not so much a postponement of gratification, however, as a choice between types of gratification. The preceding discussion suggests the latter. The issues are perhaps clearer in women, with the choice between marriage and a career faced as such and resolved, as a rule, in favor of the former.

ADJUSTING TO WORK REQUIREMENTS

The beginning of a working career has different meanings for different people. For some, going to work is the chance to realize ambitions, to prove one's self, to be free, to do interesting things, to obtain desired possessions. For others, it is the confirmation of vaguely sensed fears, being ousted from the unsure shelter of home, being put to uncalled for or impossible tests. For still others, it means disillusionment, failure to find the welcoming and roseate world that was anticipated. The requirements of a career, of a job, of work, may have been well understood before entering the labor market, or they may have been inadequately perceived. Role conflicts develop which have not been anticipated. Encountering these problems may be an adventure, it may be merely dull, or it may be very threatening.

Problems of Adjustment to Work Requirements. Although the problems of adjustment to the social requirements of work are more general and severe than are those of adjustment to work requirements, judging by the incidence of reasons for discharge, the latter are nonetheless real. They include technical competence, the routine or tempo of the work, the work load, work attitudes and values or roles, security, and time-in-job before advancement.

Technical competence for the performance of duties is frequently a problem even in trained workers, because the learning of job or position performance is necessarily much more specific than is the learning of occupational performance. Thus even college preparation in the social studies, educational principles and methods, and practice teaching do not fully prepare for the teaching of the 11th grade course in Problems of Democracy in Jonesville High School, and training as a mechanical engineer does not prepare one to cope at once with the production of dredge pumps at the Newark plant of the Wearever Manufacturing Company. For this reason virtually all workers have some problems of transition and induction when they begin a new job, and in the inexperienced worker these are often of some significance. Not many are discharged for such reasons, since recognition of the need for some induction training and some toleration of groping and floundering are general. When previous education or training has not been adequate, special supervisory help or independent or formal study may remedy the deficiency.

The routine and tempo of the work are also a common source of work adjustment difficulties. The work routines of the office, factory, and fields differ from those of the school or college. In the educational institution, for example, the student typically changes rooms, desks, and teachers every

hour, or works without supervision in the library or in his own room. In the factory or office, the typical worker stays at the same bench or desk all day long, under the supervision of the same boss, and with the same co-workers. It is only as experience brings advancement or transfers that some young workers move to more independent, self-directing jobs (129). As a student, the individual finds the pace of work more flexible: if he learns slowly, he is likely to be with a slow-learning group in school, and if he learns unusually rapidly he can, if not in a fast-moving group, finish before his classmates and find other things with which to occupy himself. One gifted third-grader used his time to learn to read upside down, since he had to keep on reading from the reader his classmates were using long after he had finished it. The individual worker, on the other hand, often finds that the pace of his work is rigidly set by the system in which he works.

In the motion picture, *Modern Times,* Charlie Chaplin, for example, created chaos in the assembly plant because he paused in his work to scratch and thus upset the production process; similarly, a young bookkeeper's assistant in a big corporation wrote poetry regularly for the last two or three days of each month, because he could get no other work to do when his records and reports were finished for the month, and because he was instructed to remain at his desk and to appear to be doing the usual kinds of paper work.

The word *routine* has other meanings which need to be considered when discussing adjustment to work requirements. Young workers, and adolescents looking forward to working, often speak of disliking "routine" work. But what is routine? What impresses one person as routine is not routine to another. The screw machine operator quoted in Chapter 1 considered his work pleasantly varied in contrast with an earlier job he had held because he turned out varying sizes of screws. To most managerial and professional workers his job would probably seem terribly routine, as illustrated by the current use of the word "repetitive" by industrial psychologists studying such tasks. High school boys and girls frequently refer to the teacher's work as being routine, "teaching the same stuff year after year," but most career teachers would point out that the children are always different. Intellectually inclined adolescents often think of research work and writing as interesting, nonroutine work, unmindful of the fact that, timewise, research work is predominantly clerical—record keeping and analyzing—and only slightly a matter of designing, while writing is, temporally, more a matter of sitting at a typewriter—or, again, of clerical work with data—than it is of planning and of plotting. One man's routine is another man's adventure. The question is, actually, one of interests and abilities, and solutions lie in good vocational orientation and counseling, effective placement, and wise supervision.

The work load, particularly in physically demanding jobs, sometimes appears as a problem of adjustment to work requirements. Again, in Chapter 1, a case was cited in which a laborer complained of going to sleep over his supper each night, so tired was he from lifting and carrying heavy loads. A delivery boy, interested in working and needing the money, gave up his job because he was expected to carry too many heavy parcels up too many flights of stairs each day. Under the pressure of loads they cannot handle, young workers quit and seek other lighter jobs. And not all work loads are merely a matter of physical weight: the number of customers to be waited on, the number of college classes to be taught, the number of pupils in a classroom, are matters of both pace and load.

Work attitudes and values have been discussed elsewhere as aspects of the acculturation problem as young people move from school to work. They also constitute problems of adjustment to work requirements, as in the case of a young accountant who left a grocery chain because he felt that the work was essentially cheating customers: business values and mores proved to be too different from his own. The impersonality of many businesses, and the often excessively personal nature of teaching under the watchful eyes of critical citizens, similarly constitute work requirements which some beginning wage earners find it difficult to meet. Sometimes a change of work situation while remaining in the same occupation solves the problem, but change of occupation is also a common solution. These conflicts of values are described in the sociological literature as role conflicts and are most frequently found in marginal occupations (156). In Chapter 2 we have already had occasion to refer to occupational role conflicts, in the case of physicians who tend to see themselves in varying degrees as members of a closely knit profession dependent upon the core group of the "fraternity" for advancement, as commercial entrepreneurs, or less often as friends of man (134), and also in the case of the occupation of insurance salesman (362). Role conflict in military occupations has been studied by Burchard (51) and by Getzels and Guba (119), the former working with chaplains and the latter with instructors in the Air Force Command and Staff School. The primary identification as officer was found to prevail over the nonmilitary role of minister, with conflict, sometimes suppressed, in the chaplain. This same type of conflict, between officer and teacher, was manifested in the Air Force instructor study. Those who taught civilian subjects felt more conflict than those who taught military subjects, the most disturbed instructors were those least committed to military careers, and conflict was negatively correlated with quality of teaching. In both instances, the choice of the major role (officer) produced the least conflict. These studies substantiate Cottrell's earlier theory (73) that

role adjustment is best when the role is well defined, when the alternate expected role behaviors are compatible rather than conflicting, and when goals highly valued by the group are attained.

Security problems vary from job to job and from occupation to occupation in ways which increase turnover during the trial or floundering years. In some fields, such as the building trades, wages are high but seasonally and cyclically uncertain. In others, such as clerical work, salaries are low but relatively certain. Ministers can be fairly sure of steady employment, but they often have difficulty making ends meet with their salaries. Resort hotel and restaurant staffs are likely to live high at times and low at others. The structural steel worker quoted in Chapter 1 had good wages, but could never be sure where he would be earning them. And an army officer's young son, hardened mover from one post to another, said, on learning that his father was leaving the Service and taking a permanent civilian job, "Good! Now we can live in our very own house and not have to move *any* more!"

Time on the job before advancement is another work requirement to which new workers often have difficulty adjusting. The proverbial impatience of youth, the increasing good health of old age, seniority rules, bias against giving responsibility to youth, the static nature of some types of enterprises, these and other factors make the time required for promotions and raises seem unduly long to many beginning workers. Time solves such problems for the individual, but youth has no time. Better vocational orientation, resulting in more realitic expectations, can help in some instances. Sometimes counseling concerning ways of winning advancement is called for. In other instances transfer to more dynamic organizations, in which ability is stressed more than seniority, is the solution. There is a noticeable contrast, for example, between the ages of executives in railroad and insurance companies, on the one hand, and those of soap manufacturing concerns and commercial airlines on the other.

ADJUSTING TO THE WAY OF LIFE

That an occupation is a way of life is a fact which has been discussed in an earlier chapter, in which the impact of work on the total life of the individual was described. Finding one's place in the world of work is therefore not only a matter of choosing and obtaining appropriate work, it is not just a process of adjusting to work requirements, but it also involves problems of adjusting to or finding a more satisfying work-related social life.

Problems of the Way of Life. These problems have to do with the statuses bestowed or denied by the occupation, and the roles which one is called

upon to play or to renounce by virtue of occupation. For while the individual has it within his power to choose between roles to some extent, and while status is also bestowed or denied by nonoccupational factors such as race, family, and personality, occupation has a limiting and a facilitating power with which the individual must reckon.

Status and role in the community is, we have seen, to some extent determined by the job title and the employer. Thus the new lawyer in Elmtown, mentioned in Chapter 2, was first considered for acceptance by the local elite on the basis of his being a lawyer, and the upper middle class boy who took a job as short-order cook in a diner was, his mother regretted, downgraded to lower middle or upper lower class in his social life. The lawyers in Wardwell and Wood's investigation were called upon to act as public-spirited citizens in order to fulfill their roles as lawyers (349). For the upward mobile individual whose job history is one of attempted advancement this may be a welcome structuring of social relations, but it can be irksome to the upward mobile individual to find he can no longer mix freely with some of his former friends. To the occupationally static individual who is dissatisfied with his social life the limitations imposed by his work on his activities and friendships may be most frustrating. And the person who finds that his work makes him unwelcome among his former friends, or even merely that his work gives him less in the way of common interests, may be deeply hurt by the social rift caused by the occupational gap. Thus the teacher who gives up school work for work in a social agency is likely, for example, to find to his chagrin that he and his former friends, who have remained in teaching, have drifted apart and really have little to say to each other when they meet.

The occupational determination of status means also the determination of the pattern of social life. Whether one's friends are seen at the country club, at the lodge, at the union hall, or on the front steps, depends upon the type of work in which one is engaged. The worker getting started in an occupation has not only to adjust to a social status, but to a pattern of social life involving place, time, activity, and persons which sets his role for him.

The pace of life is also set by the occupation. It may be frenzied for the specialty salesman but plodding for the clerical worker, varied for the budding management consultant but steady for the young member of a law firm, fast for the advertising artist but slow for the model builder. The salesman may give up selling and shift to clerical work if he dislikes the pace, or he may try to adjust to it; the management consultant and law firm employee may exchange places if both are trained as lawyers, but not if the consultant is an engineer and the lawyer has no management training; and artists are

rarely so versatile as to shift easily from advertising to model building or vice versa, even when the labor market encourages mobility. Pressures to produce vary with the type of work, and the extent to which these pressures overflow from working hours into leisure hours also varies. When work does make demands on leisure time, it does so in ways which differ with the occupation. Thus draftsmen rarely if ever need to take work home with them, or to see people about their work outside of office hours; real estate salesmen often have work to do at home during their free time, and often have to see customers then; and carpenter-contractors find that much of their free time is taken up with both desk and shop work related to jobs they hope to take on or for which they have contracted. The search for a congenial tempo may then lead to a change of work situation, that is, to position changing, or it may lead to a change of type of work, that is, to occupation changing.

The schedule of life which the occupation brings may also create adjustment problems for the worker. Working on the swing shift in a factory complicates social life, especially if the young worker wants to take girl friends to dances. The evenings of the junior executive in hotel work are not his own, for that is when he is most needed at work. The long vacations which teachers have also bring a long period without pay, and filling the gap with a temporary job often calls for both geographical and occupational displacement, which may be viewed as welcome variety and freedom or as hardship.

The community in which he lives as a result of his occupation may prove congenial, or may seem limiting to the new worker. The engineering student raised in the East and educated there may find the new industrial town to which his company sends him culturally sterile and socially barren. The young journalist who heeds standard advice and obtains employment on a small-town newspaper may find not only his assignments dull but his social life limited. The farm lad who leaves the farm for the opportunities of the big city may find the space in which he lives cramped, city recreations difficult to locate and take part in, and city people strangely cold and hostile. The educated New Yorker finds the hillbilly and cow music which dominates the air waves of the Southwest poor fare after the classical music on which he has been able to tune in at almost any hour. Many of these job-related social adjustment problems are in due course solved by transfers within the occupation. The eastern engineer advances and is moved to a larger city, the journalist is offered a job with another paper in a town where journalism is practiced at a higher level or in a city in which there is more specialized reporting, and the ex-farmer learns the ways of city folk and finds them not too uncongenial. The transplanted New Yorker saves enough to buy a high-

fidelity record player and records, which spare him not only the cow music but also the advertisements to which he would still have to listen to enjoy the more cultured music offered by some of the stations of his home town.

MOBILITY IN TRIAL AND FLOUNDERING

The trial and floundering process can be better understood if the amount of movement from job to job and from occupation to occupation which takes place during the exploratory years is known. It would also be helpful, if data were available, to know to what extent this movement is purposeful and to what extent it tends to be aimless.

The Degree of Mobility in Late Adolescence. It has been established (78, 97, 217, 381) that the exploratory period is indeed the period of greatest occupational mobility, when both horizontal and vertical movement are taken into account. Young people just out of school average eight job changes per year (381). The average man has three different jobs of eight months' or more duration before age 35, and only one such job during the succeeding years; the data on school leavers make it clear that if jobs of less than eight months' duration are counted, the difference between the two age periods is greater. Among white collar workers and proprietors in general, about one-half have had four or more occupations as well as six or more jobs (195). This job mobility is, it has been shown by studies of insurance policy address changes (220), accompanied by high geographic mobility, by movement from one place to another.

Vertical vs. Horizontal Mobility. Some light on the question of floundering as contrasted with purposeful trial might be provided by studies of the direction of occupational mobility. Davidson and Anderson (78) showed that, between the ages of 20 and 34, more than one-third (36%) of the employed population of San Jose, California, had moved up the occupational ladder, one-fourth (25%) had moved downward, and well over one-third (39%) had remained static. Vertical movement thus exceeded horizontal, but horizontal movement somewhat exceeded upward movement, and horizontal and downward movement combined far exceeded upward movement. Unfortunately the authors did not obtain information concerning the reasons for these movements, and no other studies have considered this problem except in relation to factors such as age (26:442–453; 271), so the proportions of trial and error and purposeful behavior cannot be ascertained.

THE END OF FLOUNDERING AND TRIAL

Knowledge of how the floundering and trial experiences are brought to an end would presumably be of considerable help in furthering vocational adjustment. Teachers would then be in a position to provide

better orientation in advance, and counselors would be in a better position to help young adults find their way more rapidly into satisfactory occupations and work situations. Unfortunately, this process has been singularly neglected, both by students of human behavior and by vocational counselors, as though life were static after the first full-time job is found, or as though job adjustment came automatically with work *experience,* and work *behavior* were unimportant. Lacking data from objective studies, one can at this stage only describe what observation suggests is the case.

The Adolescent Matures. One factor which seems to contribute to the cessation of floundering or trial work experiences is probably, as suggested above, time. The adolescent matures physically, coming to look more like an adult and becoming as strong as an adult. He matures chronologically, meeting legal and social age requirements. He matures socially and emotionally, through acculturation, through experience in work and social groups, through courtship and marriage.

The Adolescent Becomes Oriented. As a result of these experiences, however random they may be, the typical adolescent becomes better oriented to himself, to the world of work, to the community. He develops a degree of self-understanding and of self-acceptance, he knows something about what he is and what he can do, what he wants and what he can get. He adjusts his self-concept to reality if he is "normal," and finds a place for himself. The adolescent, now an adult, is acculturated.

SOME CASES OF TRANSITION AND FLOUNDERING

The cases which we have used to illustrate the exploratory process, and those which are used in later chapters to illustrate other processes, are those of individuals who were studied at some length and in some detail. In illustrating the transition and floundering processes, however, several brief sketches will be relied upon.

Aimlessness and Dissatisfaction. Jean, a girl studied in the Louisville Study (377a), had begun a sales course in high school, but dropped out while still fifteen in order, largely, to earn money for clothes like those other girls wore to school. For two months she worked for a friend of the family who owned a small dry-goods store. Getting "tired of being bossed around," she resigned. Some time later she got a job in a dime store, but was dissatisfied after a month and one-half there, working at fifty cents per hour, or twenty-one dollars per week, in 1947. Jean knew she could not get office work without more education, thought she wanted an office job, but felt she had been right in dropping out of school. It seems clear that she was in the midst of flounder-

ing at the time of the interview and was likely to flounder for some time to come.

Two Tries and Stability. Roy, also a Louisville Study case, graduated from high school at the age of seventeen. Going right to work in a machine shop, at a time of relatively full employment, he developed a skin rash from the machine oil. Quitting, he spent a month in job seeking. The State Employment Service referred him to a company making ornamental iron work, where he was employed as a junior draftsman. He was interviewed there four months later, when he was found to be doing progressively more advanced work and to have received a slight increase in pay. He liked the work and was considering continuing technical studies. This case of floundering thus seems to have been short-lived, the result of lack of awareness of an important limiting condition in his employment, and quickly brought to an end with the help of the public employment service.

Floundering Converted into Transition. Joe, a 22-year-old veteran, sought employment as a radio operator. He had had some pre-Service training in this field and had been a radio operator in Service, held a Federal Communications Commission license and was fully qualified. He had been to the State Employment Service but had been unable to find employment because of his youth and the fact that the field was crowded and more experienced men were preferred. He sought employment independently without success. As he had had two years' training in sheet metal work in a vocational high school, he was directed to a placement counselor for sheet metal work. He told the counselor he wanted work only as a radio operator. The counselor reviewed his qualifications and found, too, that there was no prospect of his securing the work he wanted at the present time; employers were rehiring their own employees who had had both civilian and military experience as radio operators. The industry is highly unionized and the union had a long waiting list of veterans who had had both civilian and military experience. This information was discussed at length with the veteran and he confirmed it from his own independent job-hunting experience. Nevertheless, he said, he was determined to find employment in the field and would continue his own search. The counselor encouraged him in this but discussed with the veteran the disadvantages of long unemployment and urged him to accept referral to an opening which she held for a sheet metal worker with a radio manufacturing concern. The job offered an opportunity to advance to work in the Radio Testing and Electronics Division of the company, work that would be in line with his interests, and offered no deterrent to his continued search for the work he really wanted as radio operator. The veteran was convinced

finally that this was a practical program and to his advantage in many respects, and he applied and was hired as a sheet metal worker.

In this case floundering seemed inevitable, for the young man seemed to insist on attempting the impossible: getting a job in an overcrowded field against superior competition. But floundering was avoided by the knowledge and persistence of the counselor, who helped the client use a skill in a field in which he could compete, so that he might earn a transfer or advancement to the coveted type of work.

From Gray Flannel Suit to Gray Flannel Slacks. John Trumbull was an executive's son, lived and went to high school in an exclusive suburban community. Unlike most of his schoolmates, however, he did not aspire or go to an Ivy League college, nor to one of their less renowned facsimiles. Instead, he manifested some tendency to deviate from the subcultural pattern, and chose a superior but atypical college in another part of the country. From there he went to one of the great eastern universities and earned a master's degree in economics, after which he got a job in a local bank, looking forward to a career in banking. Here he found life rather confining. Not only his work, but the way of life, even the way of thinking and feeling, seemed to him to go according to a prescribed pattern.

War, and with it a tour of active duty in the armed forces, came as something of a relief. When he returned after the war, Trumbull gave up his re-employment rights in the bank, and went to the university to earn a doctorate—in sociology. For some time he aspired to teach sociology in the metropolitan university, in which he had found the horizons much broader than they had been in the bank. Teaching and living elsewhere, like working in the bank, appeared to the emerging liberal to be too confining. In due course, however, finding advancement blocked by the presence of a number of other young instructors in the department in which he had earned his degree, Trumbull accepted an appointment in a liberal arts college with high standards and superior students. Here he found horizons broad enough and thinking creative enough to satisfy him.

In this case floundering, in the form of deviating from the usual educational pathways, then trying to conform in the bank, and later being blocked by seniority at the university, was brought to an end by the uprooting effects of war, better self-understanding, and realistic evaluation of alternative outlets.

9

THE PERIOD OF ESTABLISHMENT: THE SELF-CONCEPT MODIFIED AND IMPLEMENTED

After trial comes stabilization, after exploration comes establishment. As we have seen late adolescence, the period from eighteen to twenty-five years of age, it is a period in which there is a good deal of trial and error, and some systematic exploration of the world of work, a good deal of testing of the realism of the self-concept. College students try out various subjects before selecting a major field, and change major fields when one proves disappointing. Students who have recently left high school or college obtain a job, hold it for a few months, a year, or two, and change in search of something more satisfying to themselves and in which they are more satisfactory to employers. By the age of twenty-five, Buehler has shown (50), a tendency to settle down manifests itself. By the age of thirty-five, according to Miller and Form, most people who are going to settle down have done so. It seems, therefore, that the period from twenty-five to forty-five may be viewed as a period of establishment, during which there is a tendency to get located in a career (stabilization) and to build it (advancement). By the age of forty-five the career is, for most people in white collar and skilled occupations, established. The later stable working years are a period of maintenance, described in the next chapter.

A PLACE IN THE WORLD OF WORK: STABILIZATION

The process of finding a place in the world of work has been discussed in the preceding pages, in connection with the floundering or trial process. The factors which help to bring about an end of trial and floundering are, of course, those which contribute to locating a career in which establishment is possible, which lead the individual to settle down in it.

Acculturation and Insight. First, the acculturized and self-understanding young adult, age twenty-five to thirty-five, now sees a possible place for himself in the world of work. This is the *cognition* process as Baldwin (17: Ch. 6) describes mature behavior in childhood. Having had several jobs in as many situations, having tried out his abilities in several lines of work, he now has

some of the occupational information and insights to understand where he may satisfactorily find a career. He knows something about how he may qualify for, obtain, and advance in this occupation. Dissatisfied with his lack of progress during the floundering years, interested in establishing a home as well as a career, he has the motivation to make some of the sacrifices which are important to getting established.

This is a stage at which many young men and women seek vocational counseling as an aid to stocktaking. As the young man puts it, he finds that he has not been "getting anywhere," he wants to get started in something with a future, something he will like and which will enable him to support a family. As the young woman puts it, she has begun to recognize that she may never marry, that she has really been merely marking time so far in the expectation of meeting the right man. Now that she sees she may not meet him, she wants to make sure that she gets into something in which she will be able to find satisfaction and security. The stocktaking process is often, at this stage, effective in helping the young adult to focus his efforts, for he has, as stated earlier, built up an inventory of experience. Baldwin's second characteristic of mature behavior is manifested in *goal selection.*

Goal-directed Behavior. Knowing more specifically than ever what he wants to do and where he may be able to do it, the young adult entering the establishment stage studies his work to see how he may earn advancement. He investigates lines of transfer to ascertain other avenues of promotion which may be more appropriate or promising. This is cognition again. Action follows, what Baldwin calls the third characteristic of mature behavior: *goal-directed behavior.* The young adult takes night school courses or studies by himself. He becomes active in professional, business, or trade organizations in which he can find additional means of demonstrating ability and of making contacts which lead to better job opportunities. He abandons the night spots for the night school, or he takes work home with him and, seconded by his fiancée or wife, devotes some of his leisure to job-related activities. The specific activities vary with the nature of his occupation, but they are in any case selected as means of furthering the development of the new career. Roe's eminent biologists (265) well illustrate the role of devotion to work even to the neglect of home and family. As one author's wife once put it, "It seems we can either have a real lawn or write a book, and right now it's going to be a book."

MOBILITY AND STABILITY

Establishment in a career means the end of floundering, but does not necessarily mean the end of mobility. In many instances the

development of the career, advancement in one's chosen field, involves movement from one job to another and even from one enterprise or employer to another.

Career Development. The chemical engineer may advance by moving from one plant to another, from one soap manufacturer to a rival concern. The young lawyer may leave the law firm in which he has gotten something of a start and begin his own practice. The desk clerk in one hotel may move to another in order to rise to the position of assistant manager. The young butcher may change from one grocery chain to another in the hope of promotion, may rise to the job of supervisor, and may in due course leave meat cutting altogether to go into merchandising in the same grocery chain. Continuity of the career is not mere stability in the job. On the contrary, it consists of the development of the career, along lines which are consistent with the individual's past experience and with the development of his personality.

The increased stability of the later establishment years is brought out by the fact, already seen, that young people just out of school average eight jobs per year (381), while the age period 20 to 35 was characterized by, in one study (78), an average of five years per job, and the years from 35 on typically involved an average of thirteen years on each job. In another study (12), college men under 30 years of age had held two and one-half jobs for every job held by men over 40.

Socioeconomic differences in the establishment or stabilization process are important, as we have seen in Chapter 5. Many men and women in lower level occupations do not settle down to stable careers, but instead shift from one job or occupation to another in a career made up entirely or largely of trial periods. At the other extreme, many professionad men enter the establishment period immediately on leaving the university, and exploration for some of them is largely a matter of determining the medical, engineering, legal, or educational specialty in which to work. At the professional and managerial levels, too, establishment makes special demands on the leisure hours of the worker (e.g., laboratory research, writing, planning, entertaining business associates). At any level, from the semi-skilled up, there are likely to be changes that involve shifting from doing the work, to supervising it, to planning it. Among college graduates under 30, for example, the ratio of clerical or sales jobs to professional or managerial jobs is 40 to 60, while among college men of 40 and above the ratio is 12 to 88 (12).

Women, as this and other studies show, tend to stabilize occupationally sooner than men do, because there are fewer types of work open to them, because these jobs are more visible (e.g., teacher, secretary, sewing machine

operator), and because advancement to supervisory and managerial positions is less open to women.

THE STABILIZATION PROCESS

Stabilization in an occupation is brought about partly by the establishment of the worker in a satisfactory type of work and work situation as trial and then orientation and motivation bring him closer to his goals, but it is also partly, and sometimes largely, as in Walker and Guest's (346) auto assembly workers, due to resignation to or mere acceptance of what can be gotten. The work adjustment may be of a positive, healthy type in which abilities and interests find outlets, in which a satisfying role can be played, in which a self-concept is implemented, or it may be of a less healthy type, involving apathy, rationalization, self-recrimination, or the blaming of other persons or of circumstances for one's failure. A variety of factors contribute to, or interfere with, the stabilization process.

Seniority brings advantages in pay, in security or tenure, in privileges, and in the symbols of status. In blue denim and clerical jobs this is especially true, but it is true also of managerial and professional jobs in some corporations and in government service. These advantages are not easily given up once they have begun to accrue, and once the worker has been on a job long enough for them to begin to weigh in his favor, his chances of remaining where he is, even if he is somewhat dissatisfied, increase.

Age is partly synonymous with seniority, but not entirely so. A worker may change jobs and types of work for a number of years, thus acquiring no seniority. But his age does tend to bring an increase in conservatism and, other things being equal, of status. Men in their late twenties are likely to be considered more reliable than those in their early twenties and may be considered, for the first time, for jobs as truck or bus drivers, policemen, cashiers, and insurance salesmen. The no-longer-so-young man often recognizes that he should settle down and stay where he is even if he does not like it very much, simply because taking chances has not been profitable in the past.

Income also helps to stabilize the young adult worker. Raises imply progress and are viewed as a sign of success. They also make it difficult to leave the present field of work and begin over in some other line. This was the case, for example, of a number of officers after World War II and again after the Korean War, particularly of flying officers. Their skills were not readily transferable to civilian occupations, they did not want to risk having to live on reduced incomes, and hence some remained in uniform even when dissatisfied with military life or with flying.

Family responsibilities increase with age during the establishment period,

and also have a stabilizing effect. The need for a regular income to support a wife and children makes it difficult to give up certain pay for less certain opportunities, even if the latter seem more interesting or the former uninteresting. Furthermore, family responsibilities often include home ownership and mortgages, and disposing of a home in which one has invested money and work may be difficult. They also mean children in school, and interrupting children's schooling is widely recognized as undesirable. The present job has to be very unsatisfactory, or other possibilities very enticing, to make family disruptions seem worthwhile.

Emotional ties also tend to make people settle in their jobs. Friendships are developed in the company and in the community, and family ties may already be strong if the worker is in his home town. There is a tendency, if the work situation and occupation are at all satisfactory, to identify with the employer and with the field of work, making it difficult to consider leaving either of these. In some of the older communities of the East Coast and especially the Southeast it is not uncommon for young men and women to turn down offers of better-paying and more responsible jobs in other communities because of reluctance to sever home and community ties and to give up familiar local resources for the unknown or uncertain. The general pattern and style of life are valued more than advances in pay and responsibility, or even than more challenging types of work.

Disruptive factors, which may interfere with the stabilization process, are largely economic or social in nature, or are chance factors such as so-called acts of God. Economic depressions or booms, bias or fair employment legislation, floods or the discovery of oil, can quickly change the course of a career, can unsettle a worker and move him up, down, or around on the occupational ladder. These factors will be dealt with in a more general context in Part 3.

GETTING AHEAD: THE ADVANCEMENT PROCESS

Once embarked upon a career, the worker may settle down in it, or he may seek to advance. Blue collar workers sometimes seek advancement, but tend to stabilize and settle (129). White collar workers more frequently have and retain a high level of achievement and advancement motivation. The process of getting ahead in the field of medicine has been described by Hall (134) on the basis of interviews conducted with members of the medical profession. Two of the four stages of a medical career which he identified may be considered as pertaining to the advancement process. These were acquiring and improving a clientele, and developing informal relationships to facilitate the former process. It would seem more

accurate to describe acquiring and improving a clientele as two stages of advancement—transmitting the clientele to another physician as a third stage with which we are not at the moment concerned—and to classify developing and maintaining informal relationships for the facilitation of building a clientele as techniques of advancement.

Informal relationships, Hall reported, must be developed with the medical specialists in the community, who constitute a core group. They are an inner fraternity, to use Hall's terms, which controls hospital appointments, excludes practitioners, penalizes offenders, distributes patients, and sponsors younger physicians. They play a vital role in the careers of beginners through this policing and sponsorship system.

Background and affiliations are often presumed to be important in the advancement process for they help determine informal relationships, and some studies have demonstrated this to be so. Dalton (75), for example, analyzed the advancement and affiliations of all members of supervision and management in one industrial concern, 226 persons in all. No formal pattern of advancement existed in the company, but informal patterns were ascertained: religion, ethnic group, political beliefs, and participation in certain organizations were found to be associated with advancement. An important defect in the design of such studies is that some of these affiliations may develop after and as a result of advancement, rather than be conditions necessary for advancement. Obviously, ethnic status is a prior condition, but religious affiliation, politics, and organizational memberships can and often do change with advancement. Even if these affiliations were solely the result rather than the condition of advancement, they would nevertheless also exert a selective influence, however subtle. Thus it was found, in Great Britain, that Selection Boards tended without realizing it to give higher ratings to civil service applicants whose speech resembled that of the examiners than to other applicants whose speech tended to deviate from the unofficial but accepted standard. The affiliations a person has had in the past thus determine to some extent those which he makes in the future, as in the case of the Elmtown lawyer and the member of the local 400 (Ch. 2).

Methods of developing informal relationships for advancement vary with the occupation. Sometimes they are well known to those who use them, sometimes the process takes place without either the maker of the relationship or the person with whom it is made being aware of what is actually taking place. Browne's studies of executives (49) and Whyte's description of the role of the corporation wife (357) bring out the deliberateness with which many contacts are made, contacts desired because they may advance business interests. Homes are bought in the "right" community and in the "proper"

neighborhood, the "right" people are entertained in the "right" ways and places, children go to the "best" schools, and the "right" kind of car is driven to the "proper" country club. Thus an advertisement for Cadillac cars showed a picture of one Cadillac driver waving to another Cadillac driver, both clad in gray flannel suits, as they passed on the highway—the moral being, presumably, that buying the right kind of car brings one the right kind of friends! Dalton's industrial climbers found organizational memberships a help in advancement (75). The professions have their comparable advancement behaviors in the form of joining professional associations, serving on professional committees, and publishing—apart from the presumed contribution this makes to knowledge, it also serves the purpose of making the writer known to his peers and to potential sponsors—as Wilson (361) has pointed out in the case of college professors.

Merit or achievement also has a place in bringing about advancement, despite the deplorable state of affairs which the analysis of methods of bringing merit to the attention of those who control advancement or who bring business seems to imply. The assumption underlying this discussion has been that the individual in question is producing and demonstrating merit, whether in the form of sales, literary works, artistic creations, inventions, new knowledge of plants or planets, or completed assemblies in an automotive plant, whether by unusual application while on the job, by working and studying during his spare time, or by other types of industriousness and ingenuity. The question has been, how does the producer let his product become known? A final important method is, of course, by word of mouth from satisfied consumers: his sales volume is high, his books are well reviewed and well spoken of, his pictures or dress designs please, his inventions save labor or make life more interesting, his discoveries answer questions to which men have been seeking answers, and his output on the job makes him stand out as a good workman. The man "who builds a better mousetrap" soon finds a pathway beaten to his door. Analyses of marketing methods, whether the marketing is of merchandise or of men, show that the path is beaten there sooner if the worker makes it possible for people to see that he has a good mousetrap, but a good advertising campaign gets long-term results only if enough effort has been well expended in designing and producing the mousetrap. As in the case of Charters' college professors, advancement means working long hours—the average was nearly sixty hours per week (66). As Wilson showed, publication and committee work help to advertise the product of these hours of work (361).

The techniques of acquiring a clientele, of publicizing a service, of developing a business, like those of developing relationships, vary with the occupa-

tion. The physician must not advertise as does the automobile dealer, but he may send out professional announcements of the opening or moving of his office. He may not signalize the opening of the office by inviting colleagues and potential patients to an open house, as might a college with the opening of a new building or laboratory, but he may serve as an usher at church or help with the Community Chest drive in order to make himself known as a new practitioner. Thus lawyers serve their communities in various public service capacities (349) and make themselves known professionally to the general public. Psychologists going into private practice make talks before Parent-Teacher Associations and church groups, and teach popular psychology courses in adult schools. Businessmen and some professional men join service clubs where membership is often limited to two of a kind in order to diversify contacts and preserve seniority rights, and thus also make themselves better known to men in other fields who might be customers or clients.

A CASE HISTORY OF ESTABLISHMENT: STABILIZATION AND ADVANCEMENT

Perhaps the best way of obtaining an understanding of the establishment process, in view of the lack of adequate studies of it, is to describe the end of the exploratory period and the beginnings of establishment as they took place in the career of one young man in his late twenties. John Stasko was a veteran of World War II who sought counseling because he was dissatisfied with the prewar occupation to which he had returned. He wanted to change fields of work. The causes of his dissatisfaction, the ways in which counselors attempted to help him better to understand his situation, the steps he took to improve it, and the success with which he and counselors met, should all prove instructive.*

John Stasko was seen over a period of a year at a counseling center, once by a psychiatric social worker, five times by a student-counselor, twice by a clinical psychologist, and seven times by a counseling psychologist. He was seen at home once again, eighteen months later, by another psychologist doing follow-ups for research purposes.

Application and Intake. John Stasko filled out an application for counseling, stating his problem as being, "to find out what I am suited for," and adding "because a few years ago a complete change in my way of life, my way of thinking, took place. For a couple of years I was literally lost, didn't

* This case record and the accompanying discussion are reproduced from the *Journal of Counseling Psychology*, 1955, 2, 217–226, where it appeared under the title of "Personality Integration Through Vocational Counseling," by permission.

know where to turn. I'm badly in need of help and guidance. It's so important to me at this late age."

Actually, Stasko was 28 years old. He was of Lithuanian descent, raised a Catholic. His clothing when he came for counseling was of excellent quality and the intake interviewer noted that he was fastidiously groomed, almost to the point of being dapper. He had completed one year of high school before going to work; at age seventeen he had been employed as a truck driver. He began an apprenticeship as an oil burner installation and maintenance man before World War II, and saw military service in the Pacific theater.

His military assignment had been that of motor transport dispatcher. He had contracted and recovered from a tropical disease, had a minor arm wound now completely healed, and had developed a strong distaste for the coarseness which he reported having observed in many of his fellow men in service. He described himself "as a mere hunk of matter taking up space" before the war, but during the war he had what he described as an "awakening," and he returned to civilian life wanting better things, better associates, a better job, and a better way of life. He found himself estranged from his family, who did not share his new ideals, and from his war-bride wife, who had had a child by another man during his absence and whom he described as "a tramp." He broke with his family, divorced his wife, and would have obtained a new job had he known what or how.

Stasko had then met another girl with whom he fell in love—a college graduate employed as a secretary—and had married her, but he had felt he could not afford to give up his work to take advantage of the GI Bill, complete his education, and seek a new career. It was, however, with these questions in mind that he now, several years after the end of the war, came for counseling.

Stasko's recovery from his wartime illness and wound was now complete, but he was undergoing treatment for what he called stomach pains. The physician called them hypermotility of the gastrointestinal tract. The medical report showed that a bland diet had been prescribed, and the client reported that the physician had told him that he was nervous.

First Counseling Interview. In his first interview with Mr. B, the counselor, Stasko again told about his wartime awakening, and about his desire for a better type of work. He had four years of entitlement under the GI Bill, and wondered how this might be used for self-improvement. He wanted to give up his job and start something else. He said he felt lost. He talked about his wife, how well educated she was, what a good job she had, how well other members of her family had done, and how he wanted to do as well and to

keep on enjoying the kind of associations which he had enjoyed, thanks to her.

He went on to tell how he was disturbed by frightening dreams, and asked the counselor their meaning. The counselor asked if perhaps they were a part of his general concern. Stasko replied: "I think so. I have a tremendous ambition to succeed."

This interview closed with some discussion by the client of some of his ideas for the improvement of his company's work. He described some of his attempts to think up improved methods of selling oil burner services and to get these ideas to his superiors, and wondered what the counselor thought of them. Mr. B responded by reflecting Stasko's interest in getting his ideas across.

Second Counseling Interview. In the second interview with Mr. B the client showed copies of some letters to management about improving the company's service system. The counselor spent some time attempting to tell the client how they might work together, not as teacher and student, but as counselor helping the client to think things through. Stasko went on to tell how anxious he was about his work, how he felt lost in a big machine. He said: "I have ambition." The interview closed with the counselor suggesting that it might help to do a little testing, to get some information about the client's ability to achieve some of his ambitions. Stasko welcomed the suggestion and appointments were made for testing.

Tests and Test Results. In a supervisory conference prior to the second interview, counselor and supervisor discussed certain misgivings which they shared concerning Stasko. They wondered how healthy his rejection of his former self, his family, his fellow soldiers, even his first wife, in fact his whole life, had been. Were these rejections all justified? Had he indeed been a mere hunk of matter? Was his family beyond respecting or liking? Was his first wife really a tramp? Were the soldiers actually worse than other groups of men in combat? They had questions, too, about his present situation: Was his attitude toward his present wife, in which he practically put her on a pedestal and worshiped her, healthy? Was his ambition to get ahead too great to be good? Was he justified in aspiring to more responsible work than is usually held by men with a ninth-grade education? It was agreed that it might be well to administer an interest inventory and clinical tests of intelligence and personality in order to get perspective on these questions which would supplement that obtained in the interviews. A clinical psychologist therefore administered and interpreted the Wechsler-Bellevue Intelligence Scale and the Rorschach Inkblots. Mr. B administered Strong's Vocational

Interest Blank, on which the client revealed interests most like those of personnel men, sales managers, and advertising men.

Stasko's total I. Q. on the Wechsler-Bellevue was 125, with a verbal I. Q. of 113 and a Performance I. Q. of 134. The examiner attributed this marked discrepancy between verbal and performance scores to limited education and foreign language background. A detailed analysis of the part scores and of behavior during the examination was summarized as follows:

> This is a non-verbal person with an aspiration level considerably above his life experience. There is a compulsive quality in his wish to handle language and to impress the examiner. He seems to feel compelled to explain this need to the examiner.
>
> A vocational goal with appropriate schooling, suited to his abilities and in line with his limited cultural background, acceptable to his wife's and to his aspirations, should help relieve his anxiety.

To the counselor this last recommendation seemed to ask for more than could possibly be achieved. How could a person with such limited education attain, soon enough to assuage his burning ambition and his wife's high expectations, a vocational goal appropriate to his superior intelligence and to his vaulting ambitions?

The Rorschach report, which followed soon afterward, did little to encourage the counselor. It read, essentially, as follows:

> The client gave a limited number of responses and was rigid in his use of the cards. There is constriction and lack of spontaneity. He makes an effort to evade, to conceal his emotional life through vague abstractions. His capacity is good, but is used abstractly. His approach is more unusual than practical, he has difficulty working out plans to implement his ideas. He is so bound up with his emotional problems that he is unable to appreciate the details of situations.
>
> There is a large amount of unchannelled, explosive, destructive, affect. He wants good personal relationships but lacks the emotional resources with which to develop them. His responses are restricted, abstract, vaguely bizarre. He is anxious about people, especially women, who will, he fears, cause his destruction. These fears are related, too, to his high aspiration level, for the attainment of which he has few resources.
>
> In summary, the Rorschach reveals this young man as one who is attempting to function, not as his normal inclinations would lead him to, but according to another person's dictates. It is for this reason that there is repression of his creativity and spontaneity, to fit a prescribed plan. Without thorough-going psychotherapeutic help he may well reach a point of complete restriction and inhibition.

Case Conference. A case conference was held after testing was completed, attended by the counselor and supervisor, the clinical psychologist, student counselors, and other staff members including psychologists and psychiatric and medical consultants. This was the usual weekly staff conference at which

arrangements had been made for the discussion of Stasko's case. The question of whether or not Stasko was so disturbed that vocational counseling should be stopped, and the case transferred for psychotherapy, was discussed at some length. There was some sentiment in favor of this type of handling because of the questions raised by the interviews, by the Rorschach, and by the Wechsler-Bellevue. There was also some feeling, however, that vocational counseling should continue, with a psychotherapeutic orientation. Supporting this approach was the evidence of a level of ability justifying the high aspiration level, the beginnings made in realizing these ambitions—marrying a girl from a higher level, superior dress, manners, and speech—and evidence of ability to function on the job and at home even though at some cost emotionally. The staff decision was to proceed with vocational counseling. It was believed this might strengthen the client's contact with reality by building on his assests, avoiding the threat of psychotherapy which would uncover more fully his weaknesses. Under supervision, therefore, and with resources of the counseling center to draw on in case he failed, Mr. B, the student counselor who was working with Stasko, continued with vocational counseling.

Third Interview. In the third interview the client began by asking about the results of the tests he had taken. He was told that they showed that he had the ability to succeed in college studies, and that his interests resembled very much those of men engaged in personnel work, in sales, and in advertising. Stasko reacted to these in terms of high-level positions, and the counselor attempted to get him to see them in terms of his present work situation. Stasko then told about a transfer he had just had, in which he worked in a part of the city and with men he liked better than in his former position, and with the counselor's help went on to think out loud about the outlets one might find in oil burner installation and maintenance work, and the oil business in general, about his interest in working with people, in sales, and in merchandising. He concluded the interview by saying: "Maybe oil burner sales and service is a good field for using all three kinds of interests. Maybe that's my game after all." As he left he added: "I've learned a lot today."

Fourth Interview. Stasko began by telling that his stomach was bothering him again. He attributed the trouble to "nerves," and said the physician had put him on a diet. He went on to tell how much he liked his new job assignment. He enjoyed mixing with educated people. He talked about his wife and her friends, and how much he liked them. He asked, after a pause: "Have you reached any conclusions yet?"

When the counselor suggested that he, Stasko, might have reached some himself, Stasko replied: "I've been talking things over with my wife. It looks

like personnel work to us." There was another pause. "How do I get started?"

The counselor reflected Stasko's desire to get a start in a new field, and the client went on to talk about getting ahead, about the pressure he felt to make good. "My doctor tells me I try to do too much. Time, that is what I don't have. There are so many books to read!"

He paused again, then asked: "You think I'll be able to work through my problem myself?" to which the counselor replied: "I believe it will clear up as you examine it from various points of view." With increasing animation the client continued, as he stood up to leave at the end of the hour, "You mean vocational problems can't be separated from the rest?"

Fifth Interview. The client reported that his stomach was still acting up; the diet didn't seem to be helping much. He went on to discuss job ideas, soon shifted to singing his wife's praises again, then mentioned that her brother was a physics Ph.D. who gave him, Stasko, an inferiority complex. He went back to the job discussion again, talked about promotion possibilities with the oil company. These, he said, might not be exactly what he wanted, but they might offer the best possibilities for him. Mr. B then brought the interview to a close by discussing his imminent departure from the city, and made arrangements for the client to continue counseling with another counselor, Dr. C.

Transfer Summary. In preparing the case record for transfer, Mr. B wrote a summary of the case as he saw it then. It began, he noted, as a case of vocational dissatisfaction, immediately developed into one in which personal emotional factors might be more important. He had allowed the client to use the counseling relationship as he saw fit, and obtained diagnostic test data in order to secure a better understanding of the nature of the underlying problem. The additional interview and test data confirmed the counselor's belief that the client was seriously disturbed, but some test, interview, and observational data suggested that the client had resources which might be used to strengthen his contact with reality and bring about a reduction of the tensions with which he lived. While the client still saw his problem as one of vocational choice and adjustment, the counselor believed that further work in this area could result in a lessening of anxiety and in the freeing of the client to make better adjustments in other areas of living.

Sixth Interview. Beginning with the sixth counseling interview—ninth contact counting the intake and test sessions—another counselor, Dr. C, took over. The client opened the interview by reviewing material already covered in the intake and in the first interview, apparently feeling a need to be sure his changed orientation was understood by each new counselor. He

said he had been near a breakdown after the war, and that his second wife had been a source of strength to him. He talked about his work as an oil burner installation and service man, and his aspirations for executive and personnel work. He said that perhaps he had tried to move too fast, that he was conscious of a need to make a good impression and perhaps did not act naturally as a result. He said that he did not seem to understand how to get along well with people. He concluded by saying, "I am in your hands." The psychologist responded to this by describing how counselor and client would work together to develop self-understanding and appropriate plans.

Seventh through Eleventh Interviews. The next five interviews, one each week as in the past, were spent exploring, in discussion based on information the client obtained from talking with men on the job and from some outside reading, the lines of promotion in the oil business and in some related types of enterprises. Each time this was done Stasko came independently and voluntarily to the conclusion that the prospects for him really looked better in his own line of work, and the discovery was made that he could perhaps achieve his ambitions without casting aside all of the training and experience which he had had.

The realization that he had done something worth while, that he had some assets, gave him a new assurance and enabled him to bring up several times and explore his feelings of lack of self-confidence. He felt he could not concentrate as other people do, and cited as evidence being distracted by advertisements in the subway while trying to think about his work. He talked about the lack of congenial friends, the number who shared his wife's and his new interests being too few to satisfy their social needs. He asked if he could have a report of the testing and counseling to show the personnel manager at his company's main office. Asked why he wanted the latter, he said it would show that he was promotional material.

This led to a discussion of methods of obtaining advancement and of bringing merit to the attention of superiors. The relative values of special attention-getting feats and of doing a good steady job were discussed. Stasko then saw that more harm than good might be done by attention-getting devices, but was rather surprised at the idea. The possibility that he might have been too aggressive in getting supervisory and managerial attention was discussed, and the client seemed to come to see that there might be better ways of doing a better job, without forcing himself on his superiors.

Local evening school and college catalogues were studied to see whether he could study some relevant subjects in an institution of collegiate standing, and plans for taking the High School Equivalency Examinations were considered. The client decided to take an evening course in Speech in a

local college for which he was eligible that fall, the counselor concurring not because he agreed on the client's need in this area—his speech was actually superior—but because Stasko thought he needed it and because the activity and the associations would probably help build confidence which he needed. The client closed the eleventh interview by saying that he thought that he would want one more interview, to review plans, and that he would call after his summer vacation to make the last appointment.

Twelfth Interview. The final interview actually took place about four months later. The client called and made an appointment with Dr. C, saying he wanted to report progress and close his case. He had enrolled in the Speech class as planned, liked the instructor and students, and enjoyed the practice and the feeling of being part of a group of congenial people. He had been promoted to the position of assistant manager of the service department in a new part of town where there was a great deal of business, the homes were modern, and the people were the kind he liked to deal with. He now supervised a total of fifteen people, and felt things were going fine. Advancement in the oil business, he said, was just the thing for him; he felt that he need not be aggressive to get promoted, for his work was noticed and promotion comes with merit. With everything going so well on the job and at home, Stasko said, he was ready to have his case closed, and he would like to have his bill.

Closing Case Summary. Dr. C closed the case, noting in his summary that counseling seemed to have gone according to the plan. Vocational counseling had emphasized the client's assets, had worked through his strengths to strengthen his grip on reality and to help him improve his mastery of his environment. As his vague but high goals were made more specific and hence more realistic, the client was helped to find ways of attaining them, and as they were attained he gained a new self-confidence and an ease in interpersonal relations which made it easier for people to recognize his merits and to give him the advancement he so desired. Mr. B seemed to have begun to help Stasko to work on his problems some himself, instead of relying exclusively on physicians, counselors, managers, and other authorities to provide him with ready-made solutions. Dr. C felt in closing that he had more actively helped the client to feel that he was accepted as a worth-while person, to find out facts about the world of work which he badly needed and did not have, to explore his attitudes toward these facts, and to make appropriate plans. He noted that not all Stasko's problems were solved, and that there might still be trouble ahead, but he felt that the client had now more resources, and more use of his resources, for coping with whatever problems he might encounter. This seemed due to having made a better

adjustment in the work area, and to having developed some conviction of his essential worthiness through vocational success.

Follow-up Interview. A year and one-half later Dr. D, engaged in some research in counseling problems and methods, made an appointment with Stasko to discuss his counseling and subsequent experiences. He was warmly welcomed by both the ex-client and his wife, talked with both for a while, and then had a leisurely interview alone with Stasko.

The impression made upon Dr. D by Stasko was that of a warm, intelligent person who had considerable insight into his own personality and adjustment, a man overly motivated to compensate for the shortcomings of his background and early experience, a man too much impressed by status, but handling his status needs in a way which resulted in a minimum of discomfort to himself and to others. He seemed still to need people on whom he could look with respect and gratitude, and from whom he could perhaps derive some vicarious status. He was aware that he used his wife and Dr. C, his second counselor, as props, but he seemed to have reasonable bases for gratitude and to be making progress in self-acceptance and self-confidence, both of which he discussed with insight and objectivity. Dr. D wondered how adequate Stasko's adjustment would be in a period of reverses, but noted that his higher goals were realistic, that he was active and successful in their pursuit, and that he seemed to be gaining generally as a result of this success.

Dr. D asked Stasko about his experience in counseling, and received a reply which may be of interest because of the light it throws on the problems of the beginning counselor.

The client's perception of his counseling.

I was assigned to Mr. B. He didn't make it clear to me. I thought he'd tell me what I was suited for. I went about nine sessions (actually five) with him. Then I asked if he had come to any conclusions. He seemed to be completely taken aback, and that surprised me. He said, "Well, I thought *you* might have reached some conclusion yourself from the talks we've been having." But I hadn't. I guess we were both pretty much at sea. I'm sure I was as unsatisfactory to him as he was to me—not unsatisfactory, exactly, but not what I needed. Then Mr. B had to leave, and I was transferred to Dr. C.

I didn't know who he was at the time, but he was a wonderful man. I could see from his way of dealing with the situation that he knew what he was doing. Frankly, I was skeptical of B—he didn't seem to know what he was doing. Dr. C gave me great confidence. . . . I was always self-conscious about the rest of the family's education, and my own lack of it. But with Dr. C I got the feeling that here I was, gee, an uneducated person talking with someone who was a doctor. I felt that I could call on him and that he accepted me just as someone like himself. It really made me an entirely different person.

As I say, I went about ten times and didn't get anything. I didn't feel that I

could ask any questions—it didn't seem I had any right to. For a while I was depending on B, but he was depending on me! Dr. C, knowing what it was all about, made me feel confident in going ahead and making decisions. He helped me to see what the possibilities were, and I picked out some that looked good and acted on them—and they have all worked out swell. *Dr. C didn't tell me just what was what either, but he somehow made it possible for me to see possibilities and pick out ones that made sense to me.*

Conclusions. In Stasko we have, it seems, the case of a man who had rejected his own past and the self-concept that went with it. Formerly a street-corner tough, a "mere hunk of matter taking up space," to use his words, he was striving to function as a management-bound junior executive temporarily employed as an oil burner maintenance man. In his present married and related social life he mixed with white collar workers and lived up, however inadequately, to his new self-concept, but on the job he was continually confronted with his old self in the form of skilled and semi-skilled fellow workers. Intelligence and projective tests confirmed the picture of an unintegrated person, anxious as a result of the conflict between his vestigial and his emergent selves, and insecure in both of the roles which he had opportunities to play in life. The conflict was sufficiently violent to lead the Rorschach examiner to believe that intensive psychotherapy was required. In case conference, however, the decision was made to attempt to strengthen the emerging self-concept through educational and vocational counseling, a decision which seemed justified by the client's personal resources, by the support which his wife gave him, and by the ability which he showed to grasp reality factors and deal with them when given a little help.

The prognosis and counseling seem to have been justified by the course of treatment, by the client's subsequent effective functioning and advancement on the job and in his home and social life, by the disappearance of his gastrointestinal symptoms and return to his normal weight, by the client's own evaluation of the counseling, and by the evaluation made by an independent researcher about a year and one-half after termination of counseling. As the last interviewer pointed out, it is possible that unfavorable developments on the job might put more stress on Stasko than his reorganized or reintegrated personality structure can stand; his present adjustment may be to a dangerously high degree dependent upon external supports. But the fact is that so far the new integration has been effective, and there is real possibility that the structure will become more solid with time and experience. In the meantime twelve counseling and two testing contacts have enabled a disturbed person to function effectively and with satisfaction to himself for a period of two and one-half years, in a way which suggests that he may now continue to do so without intensive psychotherapy. This more

smoothly functioning personality integration seems to be directly attributable to the counseling psychologist's success in helping the client to strengthen an emergent self-concept, partly through acceptance in vocational counseling and partly through the clarification both of vocational objectives and of the means of attaining them.

Stasko was perhaps a somewhat unusual case, in that his vocational problems were complicated by rather severe problems of emotional adjustment. As he himself put it, "vocational problems can't be separated from the rest." But this is true also of less disturbed clients, for in all cases it is a person who is making adjustments, and adjustments or maladjustments in one area affect adjustments and maladjustments in other areas. It is simply a matter of degree, and the fact that Stasko's emotional adjustment problems were rather serious did not, as the work progressed, actually make his counseling different in any important respect from what it would have been had he been less disturbed.

The life stage in which Stasko found himself when counseling began was the exploratory stage, somewhat later than is true of some young adults. He sensed this, "at this late age" . . . "time, that is what I don't have!" He was dissatisfied with his lack of progress up the socioeconomic ladder, progress which had begun relatively late in life and had been made so far only in the marital and social areas. He was developing and had begun to implement, in his social life, a new concept of himself, but did not have the occupational information needed to implement it in his work life without writing off his experience as a total loss and returning to and climbing up the educational ladder. When counseling terminated he was, more appropriately for his age, in the establishment stage. Counseling helped him to understand how his new self-concept could more readily be made a vocational reality, both by clarifying this concept and by helping get the needed occupational information. It was possible for counseling to do this because of the somewhat therapeutic relationship which the second counselor was able to establish. Understanding better where he might fit into the world of work, and how he could advance in ways compatible with his aspirations, he took appropriate steps. He controlled his impatience for advancement, he applied himself to his job, he used initiative and imagination at work but avoided attempts at spectacular achievement; he continued his self-improvement activities in part-time study and in social life, and he quietly let management know about these activities.

10

THE MAINTENANCE STAGE: PRESERVING OR BEING NAGGED BY THE SELF-CONCEPT

By the time the average person reaches the age of forty-five he is well established in his career. He has, to use the popular phrase, made his place in the world. The place may be lowly, it may even be insecure, as Miller and Form's data (217) make clear and as observation tells us. The phrase "established in a career" may seem to clothe in dignity some work histories which are anything but dignified, or it may imply a level of achievement which does not characterize a large segment of the population. But psychologically and sociologically speaking, the varied succession of unrelated jobs held by a semi-skilled worker, like the upward and downward movement of the carpenter who becomes a carpenter-contractor first, then a small-scale building contractor, then a large-scale contractor and real estate speculator, and then again a small-scale carpenter-contractor, do constitute careers. The horizontally mobile semi-skilled worker has a "place in the world," even though it is a shifting place. Shifting at the semi-skilled level is its essential character. The carpenter-builder-carpenter also has a place in the world, even though his career has its ups and downs—its essential characteristic is the uncertainty of the building trades and of building speculation.

Typically, the worker who has reached the maintenance stage does not attempt to break new ground, to open up new fields of work. As was brought out in the discussion of age and productivity (Chapter 4), in most creative fields man's new ideas come to him by the time he is forty or forty-five. The curve of creativity rises sharply in the twenties, reaches its peak in the late twenties or during the thirties, and tapers off slowly. Lehman has shown (187) that the production of less creative works continues longer and tapers off more slowly. As middle age is reached there is a tendency to keep on doing the kind of thing which helped one to get established, which one knows how to do well. The pioneering is done by younger men who are now in the establishment stage, who have the motivation and the recent training which make it easier for them to make new syntheses of knowledge, to combine creatively ideas picked up from various elders with whom they have worked and to generate new ideas of their own.

In the maintenance stage the worker has found and made a place for

himself in the working world; he has established a home in which children are growing up and from which they are departing; he has a recognized role in the community whether this be in the Rotary Club or on the relief rolls. He feels no need to break new ground, either because the ground he is already cultivating gives him an adequate living and is such as to keep him fully occupied, or because he has not succeeded in a quarter century of effort to find and break good ground and has no hope of succeeding in renewed efforts (129). In either case it is easier to get along in the accustomed manner. The man whose success has been moderate or considerable wants to hold his gains, enjoy them, and pass them on to his children rather than risk them in the hope of greater gains. The man who has not made a satisfactory place for himself no longer expects to and, what is more, society no longer expects him to either.

ADJUSTMENT IN THE MAINTENANCE STAGE

From the point of view of adjustment and happiness, the maitnenance stage is one of fruition or frustration. The fruits of labor can be enjoyed even while the next crop is being cultivated, or the bitter fact of insufficient productivity must be accepted even while facing the prospect of continuing marginal production. In either case the worker finds himself engaged in a conflict of values, for in middle life he has a choice of working harder in an attempt to make new gains despite the odds which are against him, or of relaxing some in order to enjoy the place he has made in life even while working to retain or maintain it.

The scientist sees his growing children and his wife active in the home and in the community and would like to enjoy activities with them, but finds it difficult to give up the absorbing and compelling evenings and week ends in the laboratory and study or the summers in the field which have made possible the nice home his family enjoys. The journalist recognizes that he and his children now share too few experiences; they are involved in scouting, clubs, or adolescent social activities while he is getting out copy for the morning edition, and they are in school when he is at home in the morning. The historian, like Willa Cather's professor, finds that a widening gap is developing between his wife and himself because he is so preoccupied with writing about the people of the past that he is not sharing experiences with the people of the present. The politician, the union leader, and the grocery store owner find themselves in similar situations in midcareer, and so also do skilled workers who are by virtue of their skills likely to be affected by technological changes. The radio and television repair man, for example, finds that unless he keeps up with new developments in tubes and transistors he cannot hold

his job. The grocery store owner must find ways of modernizing his purchasing and his merchandising to compete with supermarkets. The union leader must be in the fore in securing advantages for his union. And the politician must continuously be busy studying new issues and mending old fences. The semi-skilled worker begins to feel and to resent the mechanized pace of factory work, even while resigning himself to it indefinitely.

The choices at this stage are not merely choices between competing for new gains and holding one's own. It is not as simple as that, for there are misgivings about ability to hold one's own unless one actively breaks new ground. The radio repair man was forced to wonder whether he must master television in order to hold his job or to keep his repair business going. The historian who wrote a book ten years previously but has produced nothing since finds his reputation paling beside those of authors of newer books. The psychologist who made a reputation by developing a new type of intelligence test before factor analysis came into widespread use finds that unless he masters and puts this new statistical tool to use, or finds some other specialty in which to pioneer, he may well become a back number. These and similar considerations complicate the already somewhat anxious maintenance stage. They point up the fact that perfect equilibrium is never reached, that vocational adjustment is a continuous process throughout the whole of life, and that even the maintenance stage is not, as its name might be thought to imply, a period of undiluted enjoyment of the fruits of labor. Instead, the labor continues, although perhaps somewhat less arduously because its pattern is by now well established.

Successful Establishment. When the individual has successfully established himself in an occupation which gives him some security, some stability, the maintenance stage is likely to be one of fruition or of self-fulfillment. It is a stage in which work is likely to progress in relatively familiar ways, in which changes are gradual and can be adjusted to as they develop, in which challenges lead to achievement and to satisfaction. The satisfactions vary with the work and with the worker. They may be the satisfactions of creation, of helping people, of developing or salvaging talent, of finding that one is needed, of being respected by others. These work satisfactions are often paralleled in the home and in the community, since good adjustment in one aspect of living tends to mean good adjustment in others. There is satisfaction in the achievements of growing children, in the attractiveness of the home, in shared experiences with a mate, in recognition, and in the rendering of services in the community. Hervey Allen expressed the satisfaction of this stage when he wrote, "The only time you really live is from 30 to 60. The young are slaves of dreams; the old, servants of regrets." Allen may have been overly

enthusiastic about middle age, unduly pessimistic about youth, but there is a solid reality in the achievements of the maintenance stage.

Unsuccessful Establishment. When the career is one in which the establishment process has not led to stabilization in a suitable occupation, the maintenance period is likely to be one of frustration. The insecurity of the job, downgrading, financial setbacks, rewards which are not proportionate to effort, activities or associates which are not congenial, these or some combination of these factors make going to work a trial, make one leave work full of discouragement. With failure in the work situation, coping with home and community adjustments is difficult. Maintaining the home, keeping the family together, sharing activities and interests become difficult. Analyses of the effects of prolonged unemployment (16, 38, 122, 368) have demonstrated how, under extreme conditions, this disintegration of the family takes place. Feeling inadequate at home, since he cannot support it adequately, the former wage earner finds no satisfactions there and tends to withdraw from it. The wage earner loses status in the eyes of the family as he demonstates his inability to support it, and the family members tend to seek satisfactions outside of the home which cannot be provided in the home by the leaderless family. This is the age of broken homes and of divorce. The community too fails as a source of strength, for the unsuccessful worker is not elected to club offices, is not sought as a member of committees, and finds the community at best a source of succor rather than of satisfaction.

Whether the maintenance period brings with it fulfillment or frustration, it is likely as time goes on to result in an increasing detachment from occupational and social pressures. The fulfilled person gains a perspective on life which makes him more serene, better able to take difficulties in his stride, better able to set his own pace rather than accept that of others. The frustrated person is likely to be isolated, both as a result of his own defense mechanisms and as a result of decreasing social expectations from one who has not lived up to occupational demands. These feelings are generally not verbalized, but they are easily brought to the surface when opportunity arises. The person in the maintenance stage is usually less aware of what is going on in his own life than he is in the establishment or in the decline stages.

AGING

During the middle years speed, strength, and endurance slowly decline, imperceptibly at first but at an accelerating rate as times goes on. We have seen that the professional athlete is old in his thirties, for it is in his work as boxer, tennis player, or runner that the slowing-up processes first become clear. The effects of aging—since it is indeed this even in the

middle years—are in due course seen in mental as well as in physical processes, although generally later (61: Ch. 1; 196; 287). These changes are unimportant in most occupations until the later years, but the physical changes are noticed soon enough to cause men and women in their middle years to say, wonderingly, "Guess I'm getting old!" These discoveries of a new, emerging self help in the development of a new self-concept, based upon such things as graying hair, an expanding waistline, decreased speed in going up stairs, and lessened interest in driving all night on cross-country trips. The individual thus prepares himself for getting old years before he is old; the prospect of aging becomes, for the first time, real.

The prospect of retirement tends to become real, as does that of aging (61), after age 40. The person who has come to accept himself as he is tends to be able to accept himself as he is becoming, and hence can face the prospect of retirement, consider it, and begin to plan for it. On the other hand, the person who has had difficulty bringing his self-concept into line with reality in the past is likely to have difficulty in beginning to make the changes in his picture of himself that go with aging, is likely to avoid facing the prospect of no longer being able to do his usual work. But just as it is healthy for the adolescent to imagine himself in the role of adult, thus practicing for future performances, so it is healthy for the adult to give some time to imagining himself as aging and aged, so that he may anticipate and plan for his role in later maturity (61). He needs to face the question of what adjustments he should make in his occupation as time goes on, when he may need to give it up, and to what other occupation, if any, he will change. He needs to consider what substitute activities he will have to fill his former working hours, and what he may do in the meantime to ensure having interesting substitute activities when needed (142). The place in which he will live and the people among whom he will live will need to figure in these considerations also (61). Although many people fail to realize it until too late, and society has only lately come to give much thought to the matter, career planning involves thinking not just about choosing, preparing for, entering, and progressing in an occupation, but also about progressing out of it and into a satisfying substitute way of life (322).

Just what aging and old age adjustments involve, and how people make them, are considered in some detail in the next chapter.

A CASE STUDY OF MAINTENANCE: THE PEAK IS A PLATEAU

Frank Congdon is a lawyer in his mid-forties. He lives and practices law in a small Midwestern city. He and his wife live in a

private house which they own, in one of the more attractive parts of the city but not in its most expensive section. They have two children, a son aged 20 and a daughter aged 18; next year both of them will be in college. Congdon's practice is carried on as a partner in a suite of offices in the heart of the business section. He has a steady flow of clients, providing him with work that he likes and with a steady income. People in the community consider him moderately successful: he is a fairly high-ranking member of the Masonic Lodge, owns two cars, serves on several boards and committees, and eats his weekly lunch with his fellow Kiwanians. Congdon feels that he has made a good place for himself and for his family in the community, with a good practice, a good home, and popular children off at college with good futures in prospect. The son, he believes, will get an education which will enable him to earn a good living, and will make good contacts in the process. The daughter, he thinks, will no doubt meet an equally desirable young man while in college, and make a good wife and mother in due course. Congdon, in other words, is established. He has made his place in the world of work and in the community.

Occasionally, however, this middle-aged lawyer has misgivings. He sees an occasional young lawyer getting started in his or in some other law firm, and his progress makes Congdon wonder whether he himself has done as well as he might have done. New types of legal problems emerge, relating to taxation, labor legislation, compensation, etc. Some of the younger lawyers, more recently out of law school, seem better posted on these subjects and better able to deal with related issues as they arise. His own greater experience gives him some advantages, but occasionally nearly trips him up when he finds that he has relied too heavily on his experience instead of poring over law journals, treatises, and similar materials. In fact, he finds that he is less interested in spending his evenings studying law at home than he used to be. Late hours are more wearing, and he feels he should be able to relax a bit now that he has made a place for himself and that his children are about ready to become independent. Then, too, occasional contacts with lawyers in larger, more dynamic cities make him wonder if he is stagnating.

A comfortable person, and rather secure in his achievements, Congdon does not let these occasional misgivings bother him much. He compromises, spending some time studying new problems, but relying more on his ability to get one of the younger men to brief him when necessary. The system works, and Congdon feels generally secure in his place as a moderately successful lawyer. This being the case, he feels he can somewhat reduce his community service activities. Instead of accepting every committee or board appointment for which he thinks he can find time, he now accepts only those which he

feels are particularly worth while, interesting, or honorific. He still functions as a leader in community affairs and civic service, but more selectively, more discriminatingly. Occasionally, but not often, he looks ahead to retirement. He will have an annuity, income from investments. The prospect of milder winters in California or Florida appeals to him; he'll have to ask some of his older friends about the places to which they go. He wouldn't want to move there permanently; he feels too much a part of this community. And he can keep on practicing law, in a small way, rather than give it up entirely, if he feels so inclined. If it weren't for possible bad health, old age wouldn't seem so bad. As it is, middle age looks good to him. He enjoys driving across the high plateau of life with the steep hills behind him, with pleasant and seemingly endless vistas ahead, before the eventual downward incline.

11

THE YEARS OF DECLINE: ADJUSTMENT TO A NEW SELF

The effects of aging tend to become noticeable in the middle sixties, earlier in some individuals and later in others. Sometimes senescence is noticeable even in persons in their fifties, as in some senile patients in mental hospitals; sometimes the effects of old age are not noticeable even in persons in their seventies. Thus one woman office worker, due to retire because she was about to reach the age of seventy, was amused when her colleagues explained another staff member's poor performance on the grounds that, "after all, she's getting old, she's nearly sixty." The first woman's age simply had not manifested istelf in her appearance, attitudes, or work, while the latter woman's had. Sixty-five has, however, generally been accepted as the age at which the aging process typically has noticeable effects.

The period of decline can be broken down into two substages, one of decline leading to retirement, the other of retirement itself. The former is a period of tapering off of activities, of slowing down and cutting out; the latter is one in which considerable cutting has been done, and major readjustments have to be made to curtailed activity, including the finding of substitute activities. Not everyone who might do well to retire can, in which case retirement may consist of finding a less demanding retirement occupation. And not all who do retire want to, in which case retirement may be frustrating. Some want to and can retire, in which case retirement may, depending upon the psychological and social resources of the individual, be a new opportunity for self-realization.

THE AGED INCREASE IN NUMBERS

The total number and the proportion of older people in our population have increased steadily in recent years. In 1940 there were nearly 11,000,000 persons over 65, or 6.5% of the population. In 1950 there were 12,000,000, or 13.7%. Advances in medicine and in living standards have played a large part in increasing longevity, so that a person of sixty may now expect to live another fifteen years, and one of sixty-five may look forward to another twelve years. The longer one lives, the longer one may still

expect to live. With longer life has come longer employability, about one-half of our men over sixty-five years of age being employed. Since this happens at a time when paid retirement at sixty-five has become a widespread policy, it seems likely that the large percentage of employed older men is partly a function of better health in late maturity and of a desire to work, not solely of actual financial need (343). The adjustment problems of the period of decline are thus becoming of more importance to more people.

THE PROCESS OF DECLINE

As we have seen, aging and decline are characterized by a slowing down of physical and mental processes and by decreased endurance or energy reserve. Impairments of memory also begin to manifest themselves, particularly failure of memory for recent personalities and events. Decline proceeds at different rates and in different abilities in different people. In one person it may be memory which begins to fail first, while the body is not visibly impaired. In others it may be the physical processes which deteriorate first, leaving an alert and effective mind a body which cannot serve it as well as formerly. In persons who are mentally able and active, intellectual impairment seems to come later than it does in those who are less able mentally to begin with or who do not keep on using the mental ability which they have.

The aging individual usually has some awareness of the fact that some of his capacities are no longer as great as they once were. He recognizes that he is slipping. If he has made good adjustments in the past he is likely to be able to integrate these new perceptions of himself into his self-concept, accepting himself-as-he-is-becoming instead of trying vainly to remain himself-as-he-was. If he has not made good adjustments in the past, assimilating new experiences and modifying his self-concept as they required, he is likely to have difficulty accepting these new perceptions of himself. He may suppress or repress them, he may rationalize them away, he may blame his limitations on others, or he may attempt to compensate for them in various ways. In any case, he is likely to feel the competition of younger men, and, depending upon his own emotional security and the security of his economic situation, to feel more or less threatened by these unfavorable comparisons of his performances with those of others.

Since the need to be respected and the need to belong are generally strong, the realization that one is no longer able to function as effectively as in the past, that is, to command the customary respect, and the realization that one may soon be unable to compete with others sufficiently well to remain a member of the work group, that is, to belong, constitute serious threats to the

individual. It is normal to desire to continue to have a role in affairs, but the ways of satisfying this desire must now be modified by limitations in energy, health, and mental ability. Havighurst and Albrecht (142) have shown that having a variety of roles, and being very active in some one role, are positively related to adjustment and happiness in old age.

OCCUPATIONAL CHANGES

As the individual recognizes and accepts the changes which are taking place in himself, or as they are recognized by his supervisors and co-workers, changes are made in his occupation or job. About one-half of those who are sixty and over, and work, change type of work in old age (107). The individual may initiate these himself, as appropriate to his changing status and self-concept, developing a new role and finding satisfaction in it. They may be initiated by his organization, for the sake of efficiency and perhaps for his own sake, in which case they may be accepted gracefully or reluctantly. Since externally initiated role changes are generally threatening to the individual, these tend to be resisted as long as possible, making the adjustments of decline more difficult for all concerned.

Change of Work. The nature of the job changes associated with old age has been analyzed by Miller and Form (217). They found that there is a tendency to shift from employment by others to self-employment or the employment of others. Older working populations include larger proportions of professional persons, managers, and skilled workers. The older person who works for himself can, in many jobs such as selling, consulting, repairing, and producing craft goods, set his own pace, particularly if he has a retirement income and relies on his occupation as a source of activity and of merely supplementary income. This is true also of many employing situations such as farming, managing a small store, or operating a job printing establishment. Sometimes the necessary changes can be made in the work by shifting to a somewhat different employing situation in which the same skills and knowledge can be used at a slackened pace. Retired YMCA secretaries, for example, are to a large extent employed in other related occupations, including those of assistants to college presidents, fund raisers for church boards and money-raising organizations, and assistant pastors and religious education workers in churches, often on a part-time basis appropriate to the health and energies of the individual (343). Some return to farming, in which they had engaged as boys. Those who work tend to do so, Verburg found, because they want to, not because they have to.

Such changes constitute a sort of promotion with old age, promotion to more self-directing if not more remunerative employment, and are possible

only for those who have special knowledge, skills, or resources including capital. They tend to be limited to professional, managerial, and skilled workers.

Aging brings about a decline in the numbers of clerical, skilled, semi-skilled, and unskilled workers. Service workers increase in the old-age groups, partly because low wage rates and lack of status repel younger workers and partly because here, too, the solitary nature of the work makes it relatively easy to adjust the demands of the job to the capacities of the worker.

Changes in the Job. For other persons, particularly those in professional and executive employment, decline may mean not a change of job, not retirement, but modification of the job. The physician may refuse to take new patients, and may turn some of his old patients over to other practitioners, keeping a limited practice made up only of favorite patients, as did one elderly New England physician. The certified public accountant may refrain from seeking new clients and may turn away some of his former accounts, keeping just enough to stay pleasantly busy and to supplement his income from investments. The law partner may no longer actively work on cases, but may cut down his activity to conferring with colleagues on problems in which he has special expertness. The high level executive may give a few hours each day to policy matters, arriving at the office at mid-morning and leaving shortly after lunch, leaving his judgment to be acted upon by subordinates.

Retirement. Retirement, we saw earlier in this chapter, comes to about half of the men who are above sixty-five. Paid work ceases to occupy any portion of the waking hours previously devoted to it, leaving a void of about half of the waking hours—if travel time is included—to be filled by other activities. Retirement comes most often to men who are employed by others, in clerical or blue denim occupations, and almost as often to those who are employed in managerial positions. The gap left in life by the giving up of work is one which has to be filled, then, by that segment of the working population which has least education and hence least in the way of intellectual and aesthetic resources to use in finding new activities, just at the time when the physical resources upon which it has tended to depend for recreation are most likely to be impaired. The social resources of the individual then become more important than ever.

ADJUSTMENT PROBLEMS OF DECLINE

One result of the declining capacities of the older person is the changing source of his frustrations. Everyone experiences frustrations, and adjustment is to a large extent describable in terms of reactions to frus-

tration. But during adolescent and adult years the sources of frustration are varied. They include family, friends, strangers, social institutions, the mores, as well as oneself. In old age, on the other hand, more and more of the frustrations encountered are due to declining capacities, that is, to oneself. The result may be an increase in intrapunitive reactions, in which the individual blames himself for everything, feels unworthy, becomes depressed and withdraws. Or other reaction patterns may persist; they may take an extrapunitive form; associates and society may be blamed, and aggressive behavior or speech may result. Since ability to control the emotions is one of the capacities which may be impaired, impunitive reactions are not so likely to occur.

Change of Self-concept. With declining energy, strength, speed, status, authority, and demands from others, the older person finds that he needs to modify his self-concept. He must begin to see himself as unable to do some things he used to do, less able to do other things than he has been, less sought after and respected by other persons than he once was. If he can make these changes as changing circumstances require, he will find fewer occasions for frustration than if he cannot.

Change of Work Roles. But it is not only the self-concept which must change as the individual changes. It is also his role. Sometimes, as implied above, changing roles force changes in the self-concept. But at other times the person and his picture of himself change before the role changes. This is true, for example, of men who begin to notice the effects of aging before retirement. They then find it necessary to cut down on the volume or scope of their activity, to divest themselves of some of their authority or responsibility, to accept a lessening of the extent to which they attempt to meet the needs of others. In some types of work, as we have seen, this is not easily done without actually giving up the job. A less demanding type of work may be sought, as when a railroad brakeman asks to be assigned to a watchman's job because he can no longer trust himself on or close to a moving train. In other types of work it may be possible, as described earlier, to modify the job to meet physical or mental capacities, as when an elderly physician takes fewer patients or a lawyer begins to cut down the number of clients he accepts.

Change of Way of Life. The older person finds that he is living in a contracting world. He has fewer roles (142). He engages in fewer activities, and these are less strenuous than formerly. He has fewer resources as a part-time or retired worker. His circle of friends has grown smaller, as is strikingly driven home, for example, by the discussion of participants in the class reunions of persons over sixty-five, for old friends die and withdrawal from activities means that they are not replaced by new friends. The older person

finds that he is more dependent than ever on others physically, in such matters as driving a car, doing housework, and even dressing. As the individual's world contracts he develops a feeling of not being needed, and hence of not being wanted.

THE MEANING OF RETIREMENT

Since preretirement occupations and adjustments vary so, and since the process of decline manifests itself so differently and at such different ages, retirement means different things to different people (107: Ch. 8). It may mean unwelcome inactivity, or freedom to do things one has not had time to do, or escape from pressures that are too great. Retirement requires changing the habits and daily routines of a lifetime, changing a self-concept which has been relatively stable over a long period of years, and changing a role which has been played for more than a generation. Old roles such as those of worker and parent are reduced, and others such as those of homemaker and church member are intensified (142).

Perhaps the best way to illustrate these meanings of retirement is through the case of a married couple, in which the man has been the wage earner and the woman the homemaker. When he retires, the man no longer goes to work in the morning, he feels no pressure to be anywhere at any set time, he may sleep late or get up and do as he likes. His wife, on the other hand, still has a job. The home is still there to be taken care of, dusting and straightening up must be done, groceries must be laid in, laundry has to be sent out or washing must be done, and meals must be prepared and the kitchen be put back in order. She has already adjusted to a reduction of roles, for the children left the home when she was in her forties. As she goes about her daily routines the husband is occasionally in her way, and both of them become uncomfortably conscious of the fact that she belongs there, that—whereas she has a role to play and ideas as to how she should play it—he does not belong there, he has no role to play. His role has changed from that of bread-winner to that of do-nothing, while his wife is still a homemaker. The self-concept which goes with the role of do-nothing is not a comfortable one to try to adopt after thirty-five years of working and of being a good provider.

Part-time work may be the answer. The physician may keep up a small practice. The corporation president may serve as chairman of the board. The engineer may take on some consulting or contract work, either at home or in a downtown office. The machinist may arrange to do some small jobs in his basement shop. But for many wage earners, some 50 per cent of them, especially lesser executives, clerks, the semi-skilled, and unskilled workers, this has been seen to be impossible.

Hobbies, according to many counselors of the aging and to many social scientists, are the answer. Friedman and Havighurst (107) express the opinion that "Possibly the generation now passing through adulthood will know better how to replace their work with play when they come to retire." For this to be possible their play habits will have first to change, for the fact that occupations are a major determinant of the way of life means that play tends to be work-centered.

The nature of work-centered play varies, perforce, with the nature of the work. Thus the avocations of professional men tend to bring them into contact with other professional men, as illustrated by the annual art exhibits of the academies of medicine in many cities, and by the professor-filled, American-serving *pension* in the shadow of the Luxembourg in Paris. Similarly, the avocations of businessmen tend to bring them into contact with other businessmen, as in the country-club foursomes who frequent the golf links or the card rooms, and in the groups which seek liquid refreshment on board week-end yachts or inside the yacht clubs. The hobbies associated with certain kinds of occupations are easily carried on after retirement, but in other occupations the hobby is pursued with difficulty once the occupation is abandoned. The physician-artist finds it easy to keep on painting, for he took painting up in the first place because of his interests: medical and artistic interests have been shown to tend to go together (303). Indulging these interests is purely avocational; it contributes nothing to his status as a physician; it brings him no fame or fees, merely satisfaction and friends. On the other hand, the executive does not find it easy to keep up his golf, his yachting, or his cards, for he took these up originally not so much out of interest in the activities themselves as for the associations which they would bring him. Mixing with the right people at the club brings clients, customers, contracts, and the right people are glad to mix with him for the same reasons. Once the business motivation is removed the association no longer has the same mutual appeal, and the activity itself loses its point. There are exceptions, of course; businessmen have real friendships, as well as friendships of convenience, and some businessmen like golf, yachting, or cards for their own sakes. But these are probably the exceptions. It has frequently been observed that, when they retire, professional men tend to have interests which keep them happily occupied, whereas businessmen tend to find their lives rather empty in retirement. Professional men tend to live longer than businessmen. While longevity is to a considerable extent a biological matter, it seems likely that a continuing reason for living is also a cause of continuing to live.

Preparation for retirement, it is agreed upon by most students of old age, has been neglected and should be more universal. It would seem that it might

begin in the forties, at the time when men and women first begin to feel the changes which herald the coming of the stage of decline. They might then be taught both how to keep their capacities at their maximum for as long as possible, given experience in being flexible, and helped to understand the nature of the changes which will in due course take place. Understanding the adjustments which older people are called upon to make, the problems encountered in making them, and the solutions which have been found helpful, they may then be in a better position to modify their self-concepts, to change their work roles, and to alter their ways of life, when and as they need to.

A CASE OF CONSTRUCTIVE RETIREMENT

In closing this chapter, it may be helpful to describe in somewhat more detail one case, reported by Cavan and associates (61), in which a professional woman met retirement in a positive manner. She changed her role and situation somewhat, but used her occupational and social resources, and her *savoir-faire,* to fill her old age with satisfying activity. Perhaps the case is most remarkable in that there is nothing remarkable about it, save for the subject's good use of what resources she had.

Miss Green is a woman of 78 who had attained a responsible position as a YWCA executive secretary. She established herself socially in the town where she worked, rooming for many years in one private home, and making close friends with several other unmarried women whose cultural interests were similar to her own. She traveled with these friends during her vacations. At the same time, she retained her contacts with relatives in the city where she had been born and reared. She retired with a reduced but adequate income from savings and investments. A handsome radio was presented to her by the YWCA board, staff, and club members as a token of their esteem and appreciation. Moving to the city where her relatives lived and where she still had contacts, she established herself in a small apartment which she furnished, and immediately resumed membership in the family church. She joined clubs of a type that she had not had time for when she was working and spent certain evenings each week with her relatives. When she found that she missed the contacts with young people, she assumed responsibility for a sketching class in the local YWCA. Although she is separated from the friends that she had when a YWCA secretary, she carries on a close correspondence with them. Her health is good and she is able to carry on the activities of her choice.

Miss Green has changed her role in that she is no longer a YWCA secretary, but she has not changed her social status to any great degree. For her secretaryship she has substituted many activities in which she was unable to participate when her days and evenings were spent in YWCA activities. She has no marked frustrations from physical causes, and has the economic security and much the same type of emotional security that she had during her earlier years. She has made the transition to the societal pattern of an elderly upper middle class woman without emotional disturbance (61:83–84).

PART 3

THE DYNAMICS OF VOCATIONAL DEVELOPMENT

This book has examined the nature of work, surveying in Part 1 the reasons why people work, the way in which work affects the non-vocational aspects of life, the varieties of work, and the way in which the work cycle relates to the life cycle. In Part 2 we studied the course and cycle of the working life, seeking an understanding of the nature of job sequences or of career patterns, of life stages as they relate to careers and to work, and of occupational mobility as one aspect of social mobility.

It is our purpose next to look into the factors which determine the shape of the career pattern and at the process by means of which these factors are synthesized. We have seen that parental socioeconomic status and education obtained play in important part, but we also saw that there are great variations in career patterns even within a given socioeconomic group and at a given educational attainment level. Other factors clearly play a part. These other factors are psychological, economic, social, and to some extent chance factors, although this last term is often used to include factors which can be known and hence are not chance in the strict sense of the term.

In examining the role that each of these plays in vocational development, it will be important to keep in mind the several relevant stages of development: exploration, establishment, maintenance, and decline. In the first stage it is helpful to think in terms of the development of preferences, training, and entry into the occupation; in the second and third, success on the job, satisfaction in the work, and advancement in the occupation are the objects of interest; and in the final stage, it is essential to think of success and satisfaction in leaving the occupation.

12

THE FACTORIAL APPROACH TO VOCATIONAL DEVELOPMENT

Since studies of factors in vocational choice and adjustment have generally been conducted as one means of ascertaining the validity of a psychological test or sociological device, they have generally been concerned with the role of one trait or factor. Thus studies of the validity of intelligence tests have attempted to establish the degree of relationship between intelligence test scores and occupational success—educational achievement has of course been the first used criterion—and studies of measures of social status have used vocational placement as one criterion of the effects of stratification. A few illustrations may be helpful.

Intelligence tests were first developed just prior to World War I, in a form which required individual administration. Quickly adapted for group testing, they were administered to all recruits in the American Army, and used on *a priori* grounds in military assignment. After the war the relationships between the scores made by soldiers on the Army Alpha Test were tabulated in relation to civilian occupations, and it was found that occupations could be ranked by the intelligence of the men in them. For example, the mean score of engineers was high, whereas the average score for truck drivers was low, and bookkeepers were somewhat above the middle (112). There was considerable overlapping of occupational intelligence test scores, but the differentiation of occupations was sufficient to justify drawing the conclusion that intelligence is related to placement on the occupational ladder, that is, to success as sometimes defined. Intelligence tests were put to work at once for personnel selection and vocational guidance—in fact, they were overworked for some time, in the flush of uncritical enthusiasm on the part of some psychologists, educators, and businessmen looking for simple solutions to complex problems.

Interest inventories have had somewhat the same history. The first successful vocational interest inventory ("test") was that known as Strong's Vocational Interest Blank (303). Finding that an inventory of likes and dislikes could differentiate between men in one occupation and men in other types of work, Strong proceeded, with the assistance of others, to refine the inventory, to develop scales for a variety of occupations, and to study the

role that interest thus measured plays in vocational success and satisfaction. Interest inventories, some of them much less thoroughly studied than Strong's, were at once put to work by counselors and by personnel men, again overenthusiastically in many instances.

Social status has been measured by a variety of scales, most of which have been developed, not for the study of occupations or of vocational success, but for the study of the role of this one factor in society. Thus Warner's Index of Status Characteristics (353) was used by Hollingshead in the study (151) of the impact of social stratification in adolescence, occupational experience being just one of several aspects of adolescent life investigated in this connection. Warner's original interest, too, was in social status systems, both in the community and in the factories of Yankee City (351, 352). It would be easy to get the impression from these studies that social status is such a powerful determinant of vocational success that vocational guidance and selection should be based on it, just as some have seemed to conclude from data on the validity of intelligence tests, or from the discriminating value of interest inventories, that intelligence or interest could provide a solitary basis for vocational counseling and placement. Perhaps democratic ideals have prevented this mistake in connection with social status, although it was committed in the case of intelligence and interests.

Fallacious Reasoning

But errors such as those made by users of tests which measure a trait or factor are errors of judgment on the part of users, arising from misunderstanding of the aims of the studies involving the tests in question. The fact that intelligence is studied in relation to vocational success does not imply that intelligence is, or is viewed as, the only factor of any consequence. Neither does this follow for interest, social status, or any other single factor. To establish the role of one factor is a sizable task, generally enough for the investigator's purpose. It is not enough for the purposes of the user of the test or scale in personnel work or guidance.

Common sense tells the thoughtful educator or businessman that intelligence, interest, social status, motivation, and a variety of other characteristics are probably important in vocational success. In appraising the vocational promise or fitness of an individual, he considers a number of these factors. Those which he can, with the knowledge and resources available, assess by methods which are more objective and more valid than his subjective judgment, are assessed in these ways, by tests, inventories, rating scales, etc. Those which cannot be assessed by objective methods are usually judged subjectively. The crucial process, whether several objective measures or a com-

bination of objective and subjective measures are used (assuming the reliability and validity of each), is to combine them properly for predictive purposes (215). In scientifically developed selection programs this is commonly done by means of a regression equation based on the correlation of each test with the criterion of success, but in less well-developed selection programs and in vocational counseling this is not the case. Weights are then assigned to each test score on the basis of the user's judgment, which may be reliable or unreliable, valid or invalid.

Even when the weights are scientifically ascertained and combined by regression methods, there is room for questioning the adequacy of the combination. One might ask, for example, whether the predictive value of intelligence, plus the predictive value of social status, is the same as the predictive value of the intelligence of a person of a given social status (assuming each factor has validity). The high intelligence test score of a person of high social status may be somewhat inflated by his richer cultural environment, thus making one predict considerable success (high on both predictors) whereas actually only moderate success should be predicted (moderately high on one predictor and high on the other). A person of moderate intelligence and low socioeconomic status would, by additive methods, have a forecast of little vocational success, whereas actually his deflated intelligence test score should be corrected for socioeconomic level before being combined with the social status score to yield a prediction of fair success.

In any case, it should be clear that what is needed is an understanding of how all significant factors affect success. The ideal study would therefore be one in which all presumably relevant psychological, social, and economic factors are taken into account, and in which their interaction as well as their predictive validity are ascertained. Since this has not been done to date, it will be necessary here to consider one trait or factor at a time. Before proceeding to do this in the following chapters, it may help first to review the place of what has been called *trait theory* (317) and *trait-and-factor theory* (132, 246) in vocational guidance.

TRAIT THEORY AND THE ACTUARIAL METHOD*

The pioneer description of the process of vocational counseling was that of Frank Parsons, who described it in 1909 as consisting

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of analysis of the individual, the study of occupational information, and "true reasoning" or counseling (240). As Parsons conceived it, analysis of the individual consisted of canvassing his experiences by means of questionnaires and interviews in order to ascertain the nature of his abilities, interests, and background.

Parsons' formulation has become, with very little modification, that of the vocational guidance movement. Thus the official definition of the practice of vocational and educational guidance by the National Vocational Guidance Association (374) lists (a) study of the individual, (b) study of the occupation, and (c) counseling.

The development of instruments and techniques and the accumulation of knowledge to implement this concept have not, however, been as well rounded as has the approach itself. The history of research and development in vocational guidance would almost lead to the conclusion that vocational counseling is primarily a process of helping a person match his traits with those required by available occupations. The numerous important developments have been developments of techniques and instruments of individual trait and aptitude diagnosis, and of patterns of abilities and traits characterizing people in various occupations, without emphasis on counseling techniques or on the significance of other types of personal data. The theory of individual differences in aptitudes and traits which underlies the method of determining occupational ability patterns has been the cornerstone of vocational guidance.

A few illustrations from the list of major developments in vocational guidance will illustrate this point. The work of U.S. Army psychologists in World War I made the newly developed psychological tests applicable to adults, thereby improving our techniques of studying individual differences in aptitudes. The Minnesota Employment Stabilization Research Institute (243) used the new tests both in establishing occupational aptitude patterns for a variety of occupations and in counseling adult clients. It also improved existing techniques of collecting and using information about occupational trends and requirements. The Adjustment Service of New York (28) showed how the improved methods of analyzing abilities and interests and of using systematically collected occupational information could be routinely applied on a service basis. The Vocational Advisory Service (74), prototype of many contemporary guidance centers, was, and continues to be, an attempt to put the improved techniques to work. While all of these centers used nontest case history data as well as test results, their method was rather consistently to look for abilities and for occupations in which they could be used.

The large-scale research in analytical techniques and occupational requirements launched by the United States Employment Service in the 1930's (298) was a testimonial to the widespread acceptance of the concept of vocational counseling as a process of matching abilities and interests with occupational requirements and trends. This is further illustrated by the title given by the American Youth Commission to Bell's (24) description of its work in the vocational counseling of unemployed youth: *Matching Youth and Jobs*. Finally, vocational counseling as seen today in the typical community guidance agency, veterans' counseling service, and college counseling center is a process of helping the client or student understand his abilities and interests through interviews, questionnaires, and tests, and to locate appropriate outlets for these abilities and interests in the world of work.

Paterson's chapter on "Developments in Vocational Counseling Technique" in *Trends in Student Personnel Work* (359) is an excellent illustration of this approach to vocational counseling. Although labels are often misleading, it may be convenient to call this the *actuarial method* and the underlying theory the *trait theory* of vocational guidance. It is well illustrated by Paterson's case of a woman whose failure as a clerical worker was explained by low scores on intelligence and clerical aptitude tests (actuarial prediction: most people with aptitudes like those of this woman do not make good in clerical work; therefore this woman cannot be expected to do so), and whose high manual dexterity and mechanical assembly test scores led the counselor to discuss the wisdom of entering factory work (actuarial prediction: most women with scores like those made by this woman make good in semi-skilled factory work; therefore this woman can be expected to do the same). Eleven years after having been counseled, this woman was found to have supported herself and her invalid husband and to be employed as a satisfied worker.

That this approach has proved fruitful is clear. That its contributions are of permanent significance seems likely, for the assumption that individuals differ in abilities and interests, and that these differences have vocational implications not only makes good theoretical sense but is borne out by a mass of research. But it is suggested that concern with the development and use of the techniques needed to implement this approach to vocational guidance has led both to a failure to develop a supporting theory and a failure to explore other theories and approaches which would supplement this approach.

LIFE PATTERN THEORY AND THE DEVELOPMENTAL (THEMATIC-EXTRAPOLATIVE) METHOD

Another possible approach to vocational guidance is suggested by the work of sociologists, psychologists, and economists who have analyzed the occupational histories of individuals in studying social status, intelligence, and industrial change, or the course of human life. The approach has also been used, although in a more limited way, by employment interviewers in clasifying job applicants. This method has sometimes been called the life history method, but it may be best described as *extrapolation based on thematic analysis.* (The term "extrapolation" appears in this nonmathematical sense in Wallin's discussion of prediction from case study data (347).) The underlying theory is the *theory of life patterns.*

The assumption underlying this approach is that one way to understand what an individual will do in the future is to understand what he did in the past. It postulates that one way to understand what he did in the past is to analyze the sequence of events and the development of characteristics in order to ascertain the recurring themes and underlying trends. This type of analysis differs from the actuarial method in which each specific factor is evaluated and weighted and a prediction of behavior is made on the basis of observed correlations with similar behaviors of other people. In the life pattern approach an attempt is made to project trends into the future, to extrapolate, modifying each "thema" in the light of others in order to predict future development and behavior.

The case of George Litch illustrates this approach and method. George was an applicant for a minor civil service position, currently employed as an ice cream maker. Stage 1: He had dropped out of school at the end of the eighth grade because his 56-year-old father had just moved the family to the city and was having difficulty earning enough to support the family. From that time until World War II life for both father and son was what it previously had been for the father: a succession of marginal, underpaid jobs, a tense, desperate struggle to scrape together enough to live on (first life pattern or thema: *marginality*). Stage 2: The war was an interruption which gave George a new kind of security, for he learned even in wartime that life can be fairly regular, that schedules can be established and lived up to, and that food, clothing, and shelter can come regularly enough to be taken for granted (emergent, new thema: *security*). When he returned to civilian life George married and became a tool and die maker apprentice (attempt to continue emergent life pattern). After two years his employer went out of business, owing George money for overtime work. Continuation

of the apprenticeship with another small manufacturer terminated after a mere six months when production and staff had to be curtailed. Stage 3: George gave up toolmaking in despair and took the job with the ice cream company (*regression* to first life pattern). After some time with this employer wage readjustments were made, the result of which was that, in order to earn somewhat less than he had earned previously, George had to hold two jobs and work as many as sixty-five hours a week. With a young child to support, and another on the way, George was ruining his health in a desperate effort to keep up his earnings by overtime work in semi-skilled jobs on which he could easily be replaced if occasion arose (crystalization of first life pattern). Stage 4: His application for the civil service appointment was made in an attempt to find less demanding work with regular hours, satisfactory pay, and security (attempt to re-establish emergent but now destroyed life pattern and thema of *security*). George's attitude conveyed the feeling that if this haven failed him he would not know where to turn.

The life pattern which is revealed by George's case is that of a man whose existence has been marginal since the dawning of maturity, save for Stage 2, the brief interlude of partial security in the army. Son of a drifter and marginal worker, he himself was a drifting and marginal worker whose military experience revealed to him the possibility of another way of life. Still struggling to find an anchorage and to establish himself, he repeatedly experienced failure. The desperation in his manner suggested that, if he did not soon establish his emergent way of life, nervous and physical exhaustion might lead to fixation in the drifting pattern. While the application of trait theory to this young man, through a study of his aptitudes and interests, was helpful in ascertaining what kinds of work he might succeed in, it was not enough without the insight into crystallizing life style given by the developmental method.

Studies using the life history approach have tended to be limited in their conception and scope, whereas a few have been more comprehensive. A brief survey will be helpful in documenting this point.

One of the first attempts to describe the life patterns of individuals was the study of gifted children begun by Terman and associates in the early 1920's (331). Terman followed his subjects into adulthood (to about age 45). His main interest was in the concomitants of superior intelligence. He studied its relationship to educational, vocational, and marital adjustment, and related these to each other in such a way as to give a picture of the growth and adjustment of his gifted group. The focus, however, was on superior intellect and on status at certain age levels with respect to various characteristics, rather than on patterns of development in normal persons. His monumental

studies therefore do not provide the data needed for the elaboration of a theory of life patterns, nor do they make it possible to counsel many individuals on the basis of past and probable future patterns of development.

Just as psychologists such as Terman have studied the psychological factors which interested them most, thus learning more about intelligence than about people, so sociologists have tended to limit their interests in such a way as to lessen the value of their studies. In their study of occupational mobility Davidson and Anderson (78) used questionnaire methods to obtain the educational and job histories of a presumably typical cross section of American men. Their objective, however, was simply to *plot careers,* from parental occupation, through schooling and entry job, to modal adult occupation. While their study is rich in descriptive material, it is limited to social and economic data. Like Form and Miller's more recent Ohio study (105, 217), it does not take into account intellectual or emotional factors which might explain deviation from the norm of the socioeconomic group. It has, further, the disadvantage of having obtained its data by a cross-sectional questionnaire approach, rather than by a genetic, observational method, so that it is subject to the errors of self-report and retrospection. Similar criticisms can be made of the youth studies of the depression decade, best illustrated by the American Youth Commission's Maryland Survey (23). In fact, these are of even more limited value for career pattern theory because they are restricted to the 16–24 year age range, and hence reveal little beyond the very beginning of the occupational life span.

A more dynamic approach to the study of life patterns in an American community, although it too confined itself to adolescents, is Hollingshead's sociological study of *Elmtown's Youth* (151). Despite the fact that the method is cross-sectional the picture obtained is dynamic; the techniques used were primarily the interview and observation. The data on social status which Hollingshead presents are rich in insights into the way in which status determines educational and vocational opportunities, and patterns of progress through school and into the world of work are made clear through the analysis and synthesis of case histories. But as a basis for vocational guidance the investigation has three major defects: it was made in a static community unlike many developing American cities and towns, it is concerned almost entirely with adolescents of high school age, and the focus is on only one variable, social status. As a result there are no data on adult occupational histories, and the impression given is that social status is virtually the sole determinant of occupation, with little or no consideration given to the role of abilities, interest, parent-child relationships (even within classes), or to industrial change and other economic factors.

One would expect that studies using the life history and case history methods would show a better balance of interest in factors affecting development than do those we have just surveyed. But they tend to be either the reports of one life history, as in the case of Shaw's *The Jack Roller* (286), or studies of special culture groups and processes such as Dollard's *Caste and Class in a Southern Town* (86). While these studies contribute insights into the processes of vocational choice and adjustment in special groups, their implications are limited and their focus is not generally on these processes.

Of more value for career pattern theory are two Austrian studies, Buehler's *Der Menschliche Lebenslauf als Psychologisches Problem* (50) and Lazarsfeld's *Jugend und Beruf* (185); an American investigation which derived its inspiration from these, Ginzberg, Ginsburg, Axelrad, and Herma's *Occupational Choice* (126); and Friend and Haggard's study of *Work Adjustment in Relation to Family Background* (108).

The two Austrian studies contribute little that is specific to the description of vocational development in American culture, because of differences in occupational mobility in the two countries. Buehler's study has the defect of being retrospective, for her technique was the analysis of autobiographies and of case histories obtained from old people. But these studies do provide an approach and a methodology, for they both asked how people arrive at vocational choices, and Buehler traced the processes of development throughout the entire span of life. In doing so she evolved a theory of life stages, including the growth, exploratory, establishment, maintenance, and decline stages, which have obvious theoretical value as a framework for the organization of data concerning vocational choice and adjustments.

Ginzberg's study is dynamic in conception, inspired partly by the Buehler-Lazarsfeld stress on the importance of understanding the entire life span. But as a compromise with time and other practical considerations it was cross-sectional rather than longitudinal, studying different boys and young men at different age levels; the main study included only members of the upper socioeconomic groups and dealt with only sixty-four cases, plus a smaller number of upper middle class girls and lower class boys as controls; and it focused only on the preference ("choice") process in adolescence, leaving the entry (implemented choice) and the adjustment process for other investigations.

The Friend and Haggard study used case histories, but only as a source of data which were analyzed in an actuarial attempt to reveal relationships between variables. Its outcomes are therefore those of trait theory and the actuarial method, even though the first steps were those of the case history. It is mentioned here because the study had the rather rare virtue of being

partly longitudinal rather than cross-sectional. Many of the variables were of the affective variety (e.g., parent-child relationships) which have been too rarely studied in relation to vocational choice and adjustment but which have been suggested by case history material to be crucial in personal and vocational development. The authors attempted to synthesize their findings in such a way as to portray the developmental patterns of the most and least successful members of the group studied. The most important single findings of the study were that patterns of childhood family adjustment tend to repeat themselves in the work situation in adulthood, and that having one parent with whom a satisfactory identification can be made seems to be a *sine qua non* of adult adjustment and vocational success. But these conclusions are based on a study of only eighty relief cases, and no attention was given to vocational adjustment except as general success or failure. There are no data on factors leading to entry into one occupation rather than another or to failure in one occupation and success in another, nor on patterns of progress through school, into entry and intermediate jobs, and on to regular adult occupations.

The contrast between trait and pattern theories, between actuarial and developmental methods, has been made in other contexts by Allport (5), Wallin (347), and other psychologists and sociologists who have stressed the uniqueness of the individual. As made by most writers, however, the contrast between actuarial and developmental or extrapolative methods is unfortunate, for in practice the counseling psychologist and vocational counselor must use both methods, sometimes emphasizing the one, and sometimes the other. Two cases in point are Paterson's unsuccessful white collar worker, whose low tested general and clerical aptitudes and superior manual, mechanical, and spatial abilities led her to change to successful factory employment (242); and the case of Stanley, in Shaw's *The Jack Roller* (286), whose pattern of losing jobs in the past because he had difficulty taking orders from superiors led to the correct extrapolative prediction that he would continue to fail unless employed in a situation involving a minimum of supervision.

IMBALANCE IN AVAILABLE FACTS AND INSTRUMENTS

Effective vocational counseling needs to, and often does, make use of both trait and pattern theories, both actuarial and developmental or thematic-extrapolative methods. But this chapter's brief review of the major developments in vocational guidance makes it clear that *while vocational guidance now has at its command both a substantial body of knowl-*

edge and many techniques and instruments designed and validated for the actuarial method, it has little more than a theory that career patterns exist and an idea as to the possibility of the extrapolation of vocational life patterns. In order for vocational guidance to be able to use effectively the insights and methods of modern psychology and sociology there is a need for studies of the patterns of vocational development which characterize the American culture. These should begin with early adolescence and continue at least until establishment in a regular adult occupation. They should also analyze the interacting forces which determine these patterns. Such career pattern studies should be genetic in design and should take into account the psychological and sociological factors which actuarial studies and the experience of competent observers and clinicians suggest may be significant. They would lead to the formulation of a theory of career patterns. This theory would be derived from psychological and economic as well as sociological theories and data.

Further perspective on the emphasis on trait theory to the neglect of life or career pattern theory is provided by Berg (32) who points out, in addition, that trait theory has not even been recognized as such by most of its users.

> The most pronounced change in our thinking about occupations occurred more than a generation ago when what Super has labeled "trait theory" began to be applied to vocational counseling. Curiously, the magnitude of this change and the significance of its influence was then and still is largely unrecognized. By contrast, the chronologically parallel development of psychoanalysis was characterized by storms of controversy from the initial announcement of the Freudian system to teapot tempests, at least, in the present day. Yet, both trait and psychoanalytic theory were organizations of knowledge concerning human behavior. At a time when words of Freudian flavor such as *libido* or *anal eroticism* would cause many persons to blush or bristle, the same people received findings about aptitudes or abilities with a quiet acceptance usually reserved for the gospels. Nobody seemed to challenge the basic ideas behind trait theory. Indeed, few persons seemed to recognize that it was a theory. Psychoanalysis, on the other hand, was not long promulgated before basic modifications were proposed by Jung, Adler, Rank and others, and, more recently, by such neoanalysts as Fromm, Horney, and Sullivan. At the same time, paradoxically, people calmly talked in terms that implied trait theory, perhaps without knowing it, when they conversed about "square pegs in round holes" and of necessary aptitudes for job success.
>
> As a result of this serene acceptance of trait theory, vocational counseling activity has widened in scope during the last decade or two, without necessarily providing great improvement in the quality of our work as counselors. Certainly there has been nothing recent to compare with the gains which resulted from the introduction of interest and aptitude tests twenty-five years ago. Indeed, for the past decade there has been clear evidence that we need a new and larger theoretical frame-

work as indicated by the trivial character of much recently published research on vocational counseling.

All of this emphasizes the need for including trait theory in a broader framework if we are to progress. . . . One of the functions of theoretical formulations is to force us to take cognizance of factors which previously are ignored. Certainly every vocational counselor is aware of life patterns, and certainly he often takes them into account in at least a casual way when dealing with his clients. Most all of us have used life pattern theory, though without the label, when we may have remarked testily in staff meeting, "I don't care how high his abilities are or what promises he makes. He's over 30 years old and never held a job for more than 5 months." But the *systematic* organization of life pattern information will enable us to utilize such trend data routinely just as we now use trait information. . . . As a venture in prophecy, I should say that in a decade or two we shall routinely be using the research results of career pattern theory with the same facility that we use the findings which stemmed from trait theory. Naturally we shall continue to use trait theory; however, trait and career pattern theory will probably be bundled into some inclusive bin labeled "vocational counseling practice" and we shall talk of aptitudes in a matrix of life experience.

With this perspective on trait and factor theory, let us now turn to the consideration of vocational success and the role which various factors play in it.

13

VOCATIONAL DEVELOPMENT *

What is attempted in seeking to promote vocational development? Is it the same as personal development? If not, how does it differ from personal development? Answers to these questions may be derived from an analysis of the objectives of vocational guidance as they have manifested themselves in the work of vocational counselors.

One way in which the objectives of vocational guidance manifest themselves is in the criteria used in judging vocational success. If the general objective of vocational guidance is to help people to achieve success in the world of work, then its specific objectives should manifest themselves in judgments of success. These judgments are in some instances the passing judgment of observers, and hence difficult to study; but they are also made by vocational counselors in studies evaluating the effectiveness of counseling, by personnel workers making employee evaluations, and by psychologists studying the relationships between personal characteristics and success. What are these criteria, then, which have been used in judging vocational success?

CRITERIA OF VOCATIONAL SUCCESS

In the 1920's, when vocational educators, vocational counselors, and vocational psychologists were first beginning to undertake the scientific study of civilian occupation, Bingham and Davis (33) made a study of the relationship between intelligence and success in executive employment. The vocational achievements of the executives were judged by the amount of money they earned, their credit ratings, the number and types of civic organizations and social clubs they belonged to, and similar evidences of status in their work and in their communities. Bingham was at that time pioneering in vocational psychology, but this criterion of success was as comprehensive and as carefully worked out as any of the next 20 years.

Earnings and output were often used during the decade after World War I as the sole basis for judging vocational attainment. Many recent studies have used this same production criterion as an index of achievement. For

* Much of the material in this chapter is taken from two papers which first appeared in *Occupations, the Vocational Guidance Journal*, 1951, 30, 5–9, and 88–92, as "The Criteria of Vocational Success" and "Vocational Adjustment: Implementing a Self Concept."

example, in a study of machine bookkeepers in a large Philadelphia bank (144) the index of success used was the number of entries made per hour, and in another study of factory workers in St. Louis (216) the criterion was the number of units assembled in the course of a day's work. But during the late 1920's and early 1930's a variety of other criteria of success began to be used.

Advancement was one criterion, the individual's rate of progress in the company or in his occupation. Pond and Bills (249) used advancement from routine clerical work through supervisory positions to planning positions as an index of success. Here the focus is somewhat different from that used when output is the index, for the latter criterion purports to measure success in the present job, whereas in the case of advancement the aim is to judge suitability for higher grades of work. It is not necessarily the worker who is most successful in the *present* job who will make the best worker in the *next higher* job.

Stability in an occupation began to be used as a criterion in the late 1930's. As the depression made even holding a job, let alone progressing in it, seem like more of an achievement, occupational stability became more popular as a criterion of success. The British National Institute for Industrial Psychology (160, 293) employed this index in evaluating the effectiveness of vocational counseling with and without test data. The reasoning was that a well-placed youngster would stay in his job, while a badly placed boy or girl would in due course leave. In his earlier studies Strong (303) used occupational stability as one of the criteria of success in the standardization and validation of his well-known interest inventory. His reasoning was that if a man remained in a field for three years he must be reasonably competent and reasonably well satisfied. Here there is introduced into the criterion of success a somewhat different note, for while competence is mentioned first, satisfaction is also considered. It is not only performance that counts, according to this argument, but also how the worker feels about his work. In his eighteen-year follow-up (304), however, Strong concluded that merely being in the occupation at the time of the study was a necessary compromise criterion, without reporting in any detail the data leading to this conclusion.

Ratings by supervisors were also relied on while all these means of judging occupational success were being used. They were used largely on the grounds that more objective evidence, such as output, could not be used in judging certain occupations: teachers cannot be judged by the number of pupils they teach nor even by the number who graduate, pass college entrance examinations, or get over some other hurdle. The job is too complex and

there are too many variables at work. In keeping with the emphasis on *performance* which characterized the other popular criteria of the years after World War I, these ratings emphasized the quantity and quality of the worker's work, as shown by the very term *efficiency* rating.

Despite their low reliability, ratings have one advantage over some of the more objective criteria such as output: they provide a broader and more comprehensive estimate of achievement. That this is so is made clear by the intercorrelations of the traits or characteristics rated and by their relationship to ratings of over-all value to the organization. Apparently, no matter what the supervisor is asked to rate, no matter how specific the behavior he is asked to judge, he tends to rate on the basis of a general evaluation of the worker as a worker and as a person (345: 5, 115–119). In fact, it would hardly be an exaggeration to say that he rates the worker more as a *person* than as a *worker.*

More comprehensive criteria. Attempts to judge the success of workers in the intangibles and in the creative fields have in recent years shown some desire for more comprehensive criteria than output, advancement, stability, and efficiency ratings. A series of studies of teaching success conducted by Barr and his students at the University of Wisconsin (275) used as their measure of teaching success the gains made by pupils on achievement tests. Judging a teacher by the progress made by her students seems at first to be a reasonably comprehensive index of success. But it assumes that pupil learning of facts and skills, such as is measured by achievement tests, is the sole objective of teaching. And most people are not really satisfied to judge teachers by that, and just by that. They are also interested in how the teacher affects the personality development of the student, the extent to which he stimulates the student to further learning (rather than just cramming him full of presently needed subject matter), and a number of other things not measured by the usual achievement tests.

Another attempt at a more global method of judging vocational success was made by Roe (262), who needed to select a group of creative artists. She obtained the names of twenty men who were adjudged by established art critics to be among the most eminent in the country. But judges are no better than the criteria by which they judge, and their criteria inevitably reflect somewhat the values, prejudices, and limitations of their times; if they did not, the public would not retain them as judges. So, although Roe's objective was to study a group of creative artists—her principal interest was the effect of alcohol on creativity—all that she could actually be sure of was that she had a group who had succeeded in pleasing a vocal segment of the general public.

The use of criteria such as these is in keeping with the emphasis on the objectives of vocational guidance as expressed in the official definition formulated in the 1920's by the National Vocational Guidance Association and revised several times since then (374). It states that the aim of vocational guidance is "to assist the individual to choose, prepare for, enter upon, and progress in an occupation." The emphasis seems to be on success; on choosing a field in which one can *compete effectively,* preparing so that one can *do the work,* getting a *foothold* in the field, and doing the work so that one can *advance* in the field. Although excluded neither from the definition nor from the thinking of those who prepared it, the attitudes, values, and needs of the worker, and his satisfaction in his work, are not explicitly mentioned and hence receive no attention. Perhaps it was assumed that a person would not get a job, or at least not move ahead in it, unless it was in keeping with his values and met his needs; if so, the assumption is not warranted, as is known from many work histories and case studies. In any case the focus is still on *achievement* rather than on *adjustment.*

A NEW TERM

Perhaps it is unwise to use the term *success,* since in American culture success is so often measured by achievement. One tends to forget that success is not only a *social* or *objective* matter, but also a *personal* or *subjective* matter. "Success," as the world judges it, is fruitless and empty unless it is also seen as success by the individual. What would wealth have been to Gandhi or the love and respect of humble men and women to Bismarck? What use had Thoreau for prestige and status, or Theodore Roosevelt for opportunities to be alone with himself and the universe? In the eyes of each of these persons, and of some others, each of them was successful; but in the judgment of some others each of them was a failure, however famous he may have become. Individual values, and hence individual judgments, differ in such matters.

External frames of reference are used when the criteria of success are status or performance criteria. Status in the occupation, in the type of enterprise, on the job (in the work situation), in the world of work (on the occupational ladder), and in the community are all essentially prestige criteria, prestige in the eyes of a more or less broadly defined group of other persons. Such criteria have been considered in some detail in connection with the nature and measurement of social status. Performance on the job, when measured in terms of some output or quality criterion, is not a matter of status, although it may affect status, but it is also a criterion which is external to the individual.

Internal frames of reference, on the other hand, are used with satisfaction criteria. The worker's attitudes toward his job situation, toward the nature of the work in which he is engaged, his occupational role, and his way of life, are the concern in such criteria. Friesen's attempt to differentiate between work satisfaction, satisfaction with the work situation, and domestic satisfaction (109) is an illustration of studies which take these different sources of satisfaction and dissatisfaction into account; Schaffer's study of need satisfaction and job satisfaction (279) is another.

A number of British psychologists, their activities focused by the work of the National Institute of Industrial Psychology, the Medical Research Council, and Rodger as editor of *Occupational Psychology,* have concerned themselves with the definition of occupational success (79, 148, 208, 255, 302). Heron has worked with both internal and external frames of reference using the concepts of satisfaction and satisfactoriness. He analyzed data on 147 bus drivers (148); the two criteria were assessed by means of a satisfaction inventory and by a combination of employers' ratings of satisfactoriness, absences, and disciplinary actions. The two indices were correlated significantly but not to a high degree, the coefficient being .37. Satisfaction was found, in a factor analysis, to consist of liking for the work itself, liking the present employment, acceptance of pressures, and aspirations and adjustments. His findings thus parallel those of Friesen (109), working with the writer, in differentiating between satisfaction with the work itself, satisfaction with the work situation, and general adjustment.

A Basis for Choice of Criteria. With such a variety of criteria, one may well ask for a criterion for selecting a criterion. How, in any one situation, should one define vocational success? The answer must be that the criterion or definition of vocational success must vary with the purpose one has in mind. Is the objective to select workers who will be productive? Then the criterion should be an output criterion such as the number of unspoiled items produced within a given length of time. Or, if training new workers is costly, one may modify the output criterion by adding a stability criterion such as length of time on the job, or reaching a minimum tenure point which involves a fair return on the company's investment in training the worker. Is the objective the selection of workers who will build a good reputation for the company? Then the criterion may be repeat sales, or an index of customer satisfaction with services provided obtained by polling techniques. Is the objective to evaluate the place the individual has made for himself in the world? Then a status index is called for, but the type of status (in the work group, in the occupation, in the community at large) must also be defined. Is the purpose so to educate people that they will find happi-

ness? Then a satisfaction index is needed. Is over-all success the goal? Then a combination of criteria is called for: any one is too specific. And, in selecting and combining criteria value judgments must be made. One judge may value performance highly, satisfaction little, thinking largely of society's needs. Another may stress status and minimize performance, because of his own status needs. And still another, individualistic in his philosophy, but in an altruistic way, may stress satisfaction.

Perhaps it is necessary to redefine success, to use some other term which allows more room for individual differences in standards and in objectives. Perhaps the term adjustment would be more appropriate.

Adjustment. This is no new suggestion, for the term adjustment is, if anything, too popular. In 1925, Harry D. Kitson published a book on *The Psychology of Vocational Adjustment,* and ten years later Laurence F. Shaffer wrote his widely used and recently revised *Psychology of Adjustment;* in 1942 the writer published his own first treatise of *The Dynamics of Vocational Adjustment.* There followed McKinney's *Psychology of Personal Adjustment,* Symonds' *Dynamics of Human Adjustment,* Lehner and Kube's *Dynamics of Personal Adjustment,* and several other "adjustment" texts. One reason why the term is so popular is because, with an increasing understanding of the principles of mental hygiene, there has developed an increasing awareness of the fact that success is a personal, subjective thing best judged not solely in terms of the individual's performance, important though that is, but also by his feelings and attitudes. Let us look, therefore, at some of the more recent trends in the criteria of vocational success or adjustment in order to see how this awareness has affected practice.

New Criteria. The trend is revealed, for example, in the traits or types of behavior which are dealt with in current *rating scales.* Whereas many of those that were used in the earlier days stressed descriptions of the worker's application, industriousness, and output, today rating scales pay more attention to the worker's relations with his fellow employees, subordinates, superiors, and customers. Investigations such as the Hawthorne Study (269) made it clear that these factors are of vital importance in production and in job stability. Consequently both practical personnel managers and students of men and of work have paid more attention to interpersonal relations.

Another sign of this awareness of the fact that success is partly a subjective matter appears in the use of workers' *self-ratings* of satisfaction as an index of adjustment. In one of the studies (143) which was carried out in the mid-1930's to evaluate an experiment in vocational guidance significantly named the "Adjustment Service," questionnaires to former counselees asked them to rate themselves on satisfaction with their present field

of work. In England during the 1930's (160) the National Institute for Industrial Psychology asked former counselees to rate their satisfaction in their work, and these ratings were one of the criteria used in ascertaining whether or not test data improved the quality of vocational counseling. Parenthetically, they did.

But perhaps the most clear-cut evidence of the fact that vocational counselors and psychologists have translated their awareness of the importance of subjective reactions into practice lies in the increasing popularity of the *clinical appraisal* of an individual and of his work as a method of evaluating vocational success and adjustment. One of the best examples is the recent study by Friend and Haggard (108), in which worker adjustment was judged on the basis of the balancing of the satisfactions which the individual sought in his work and the satisfactions which the job provided, as seen in long-term case histories. Another is Friesen's study, mentioned earlier.

Similar to this in its emphasis is the study of Robert Schaffer (279), in which the question is the extent to which agreement between the individual's picture of himself on the one hand, and opportunities to be that kind of person in his work on the other, is related to being satisfied with his work. It was Schaffer's sustained hypothesis that, if a man or woman cannot, in his working life, find opportunities to be the kind of person he wants to be, for self-fulfillment, he will be dissatisfied with his work. Using different techniques in a current study, Brophy also has confirmed this hypothesis. In the fullest sense of the term, vocational adjustment implies that the individual has opportunity to express his interests, use his abilities, achieve his values, and meet his emotional needs.

A Redefinition Needed

If these trends are in fact indicative of changed understanding of the nature of vocational success, then a redefinition of vocational success and of vocational guidance is called for. That which is implicit in these criteria should be made explicit. The long-used NVGA definition is no longer appropriate.

DEVELOPMENT

The impact of developmental psychology on vocational guidance, in the form of Buehler's life stages theory (50), one of its derivatives as formulated in Ginzberg's developmental theory of occupational choice determinants (123, 126), and the sociological variant developed by Miller and Form (217), has led to still another type of concept and criterion, which is only now beginning to come into use. This is the concept of voca-

tional development (23, 159, 171, 316, 321, 323), the stage of development attained being vocational maturity. The indices of vocational maturity are themselves of course subject to operational definition, and various specific definitions have been suggested (321, 323).*

Some Definitions. The terms *vocational development* and *vocational maturity* are not found in the literature of vocational guidance until recently. Instead one encounters the terms *vocational choice* and *vocational adjustment.* This is because vocational guidance has borrowed heavily from differential, but little from developmental psychology.

The literature of developmental psychology abounds with discussions of maturity, usually with an adjective. There are emotional maturity, intellectual maturity, physical maturity, and social maturity, but for some reason the alphabet stopped at the letter *s*; the recent texts by Kuhlen (181) and Jersild (167) are rare exceptions. Is vocational maturity related to these other types of maturity? Is there such a thing as maturity without an adjective, or are there indeed several different types of maturity? The failure to develop, until recently, theories and measures of vocational development is a major weakness in psychology.

The term *vocational choice,* widely used in discussions and studies of vocational development and adjustment, conveys a misleading notion of neatness and precision in time, of singleness and uniqueness in the life of the individual, as Dysinger (95) has pointed out. Drawings showing a fork in a road, each branch leading to a different occupation, with a young man standing at the crossroads, epitomize this notion of the neatness and precision of the event in time.

Choice is, in fact, a process rather than an event. Although this point has repeatedly been made (176:231; 309:172–175; 374), it is frequently lost sight of. The term should denote a whole series of choices, generally resulting in the elimination of some alternatives and the retention of others, until in due course the narrowing down process results in what might perhaps be called an occupational choice. Thus an adolescent may have a *preference* for the legal profession while still in secondary school, but his occupational *choices* consist first of choosing the academic course of study in secondary school, then a liberal arts program at the university, then a major in history, then graduate study in a school of law, and finally the legal profession as an employee in a law firm. Even after this the process of occupational choice continues, for he must in due course choose between remaining

* Parts of the material which follows are taken from the writer's paper "The dimensions and measurement of vocational maturity," *Teachers College Record,* 1955, *57,* 151–163, and *Le Bulletin de L'Association Internationale de Psychologie Appliquée,* 1955, 4, 34–65, by permission.

an employee of the law firm, becoming a partner in it or another firm, setting up his own practice, or accepting employment as a lawyer in some other setting such as a corporation.

For reasons such as these, the term *vocational development* has come into use during recent years.

Vocational development is conceived of as one aspect of individual development. Like social development, emotional development, and intellectual development, it has both distinctive characteristics which make focusing on it worth while and common characteristics which reveal it as one way in which the general development of the individual manifests itself. Work, like social life and intellectual activity, is one specific medium through which the total personality can manifest itself. Like other aspects of development, vocational development may be conceived of as beginning early in life, and as proceeding along a curve until late in life. Thus the four-year-old who plays carpenter or storekeeper is in a very early stage of vocational development, and the septuagenerarian who no longer teaches or does research but still attends scientific meetings or writes his professional autobiography is in a very late stage of vocational development.

Just as general development can be broken down into major life stages placed sequentially on a continuum, each stage having characteristics which are peculiar to it and which justify singling it out, so the continuum of vocational development can be broken down into vocational life stages, each defined by its peculiar characteristics. We have seen that the major vocational life stages may, after Buehler, be classified as the Growth, Exploratory, Establishment, Maintenance, and Decline stages. Most of these stages can in turn be divided into substages. The Exploratory Stage has Fantasy, Tentative, and Realistic (or Initial) Substages characterized by appropriate attitudes toward work and occupation; Establishment begins with Trial and progresses into a Stable Substage as the individual begins to make his place in the world of work; the Maintenance Stage is as a whole characterized by stability in the field in which establishment has taken place earlier in life; and the Decline Stage begins with a Substage of Deceleration and progresses to one of Retirement.

The concept of vocational development leads logically to that of vocational maturity. A definition of this term would seem to be necessary if one is to think in terms of development, and was found necessary in the work of the Career Pattern Study (321, 323) as a basis for constructing a yardstick against which to measure vocational development and as a guide for the selection of data which can be scaled for its measurement. Dysinger's

stimulating discussion of this topic (95), unique in the literature even in 1950, stopped short of the question of assessment.

Vocational maturity is used to denote the degree of development, the place reached on the continuum of vocational development from exploration to decline. Vocational maturity may be thought of as vocational age, conceptually similar to mental age in early adolescence, but practically different in late adolescence and early adulthood because more distinctions can be made in the developmental curve at those stages. Vocational maturity, the place reached on the vocational development continuum, may be described not only in terms of the gross units of behavior which constitute the life stages, but also in terms of much smaller and more refined units of behavior manifested in coping with the developmental tasks of a given life stage. It is this latter definition which is most helpful in considering a given individual who functions at a certain life stage.

Since the vocational life stage at which an individual is functioning may or may not be appropriate to his chronological age, it may sometimes prove useful to introduce a ratio comparable, again, to that used in judging mental maturity.

The vocational maturity quotient may thus be conceived of as the ratio of vocational maturity to chronological age. It would indicate whether or not the vocational development of an individual is appropriate for his age, and how far below or beyond his chronological age his vocational development is. Such a VMQ will probably never be developed, but the concept is helpful in differentiating two important aspects of the vocational maturity concept, one the status of the individual on a behavioral scale of development, the other his behavior viewed in relation to his age.

But a third concept has also been isolated in what was originally viewed as vocational maturity, namely the familiar concept of vocational adjustment. It is, of course, not new in the history of applied psychologoy for maturity and adjustment to be confused, and the significant point may be that some clarification may have been achieved in the vocational development field.

Vocational adjustment may be defined as the outcome of the handling of the vocational development problems encountered by the individual, as compared with the results obtained by others meeting these problems, regardless of his chronological age. It is the result of interaction between the individual's personal resources including his vocational maturity—what he brings to his encounters with reality—on the one hand, and reality demands on the other. *Vocational maturity is thus defined in terms of types of be-*

havior, whereas vocational adjustment is defined in terms of the outcomes of this behavior.

The Dimensions of Vocational Maturity. If vocational development is a continuum, and vocational maturity a point on this continuum denoting degree of development attained, it becomes important to specify the dimensions along which vocational development takes place and on which vocational maturity is measured. Although in the last analysis attempts to specify the dimensions of vocational development must stand or fall on the basis of empirical results, it is also true that before any empirical yardstick can be used some system of measurement must be agreed upon. In the absence of previous attempts to define vocational maturity, the Career Pattern Study (323) devoted considerable time to developing a rationale for its measurement, concentrating on dimensions which should be applicable during adolescence because the subjects of the Study were then in their teens. As they grow older, and go through the various stages of vocational development, definitions of dimensions and indices appropriate to older age levels are being developed.

Viewing adolescence as an exploratory stage, in which the major substages have been defined by Ginzberg and associates (126) as the tentative and realistic (the fantasy substage being largely preadolescent), it was postulated that this stage of vocational development is characterized by: 1) increasing orientation to vocational choice; 2) increasing amounts of vocational information and more comprehensive and detailed planning; 3) increasing consistency of vocational preferences; 4) the crystallization of traits relevant to vocational choices; and consequently, 5) increasing wisdom of vocational preferences. This operational definition is similar to Baldwin's definition of maturity (17:28) in terms which may be summarized as scope, realism, flexibility, and stability.

At later stages of vocational development the specific content of some or all of these dimensions (i.e., the details of the indices or scales) may change, and it may even be that some of these dimensions no longer pertain.

Orientation to vocational choice appears to consist in part, in adolescence, of concern with the problems of vocational choice. The assumption, subject to later empirical testing, is that one who is concerned with making choices is more likely to be ready and able to choose when called upon to do so than is one who is not concerned with choice. But in early adulthood such an index of choice orientation might no longer be functional. On the other hand, having made a choice and having done something concrete about it may be a very appropriate index of choice orientation in early adulthood. Again, this index might not be applicable in late adulthood, but similarly

a valid new index might be available in anticipation of the need to retire (i.e., to give up one's vocational choice), and later still acceptance of no longer having a vocational choice may be more appropriate. A number of such indices of orientation to vocational choice in adolescence have been considered and reported elsewhere (321, 323); they are summarized here.

Information and planning suggested itself as a possible dimension of vocational development because, in contrast with the neonate who knows nothing about occupations and has no vocational plans, the experienced worker has a substantial fund of information about jobs and has made and carried out vocational plans. His information and plans may have been inadequate, but they exist nonetheless, and in some degree. Here, too, there may be some doubt as to over how long a segment of the vocational life span this dimension is operative, but it seems likely that different types of information and planning are appropriate at different life stages. For example, information and plans concerning occupational preparation and entry are appropriate in adolescence, while getting established and advancing are pertinent later, and planning for deceleration and retirement is appropriate still later.

Consistency of vocational preferences seemed worthy of consideration as a dimension of vocational maturity because greater maturity should result in a narrowing of goals, in the elimination of the less attractive preferences and in the crystallization of preferences which have stood the tests of exploration and trial. It may well be that consistency does not increase rectilinearly; in fact, it may prove that there is a spurious consistency which accompanies immaturity, followed by inconsistency resulting from more active exploration and trial, which in turn is followed by a more genuine consistency with greater vocational maturity. These possibilities are of course subject to empirical testing, provided one has a definition of the dimension and develops indices for measuring it.

Crystallization of traits and aptitudes was deemed worthy of investigation as another possible dimension of vocational maturity on the grounds that, the more highly developed and integrated the individual's ability and trait system, the greater his readiness to cope with the developmental tasks of vocational choice and adjustment. Maturity may be conceived of as the degree to which abilities and traits have taken shape, providing consistent individual bases for action. Since development proceeds from the general to the specific, then the person in whom considerable development has taken place should be a more highly differentiated person than the individual in whom less development has taken place. Furthermore, his differential characteristics should be more stable. If this reasoning is sound, then standing on

a scale of crystallization of occupationally significant traits should provide a measure of vocational maturity.

Wisdom of vocational preferences has been viewed as one of the most complex, most difficult to manage, but at the same time conceptually most satisfying, of the dimensions of vocational maturity. This is because the other dimensions, i.e., orientation to vocational choice, information and planning, consistency of vocational preferences, and crystallization of traits, are unlikely to lead to vocational adjustment unless the resulting or inherent vocational preferences are wise. The reason for considering them as dimensions of vocational maturity is the postulate that they will lead to vocational adjustment.

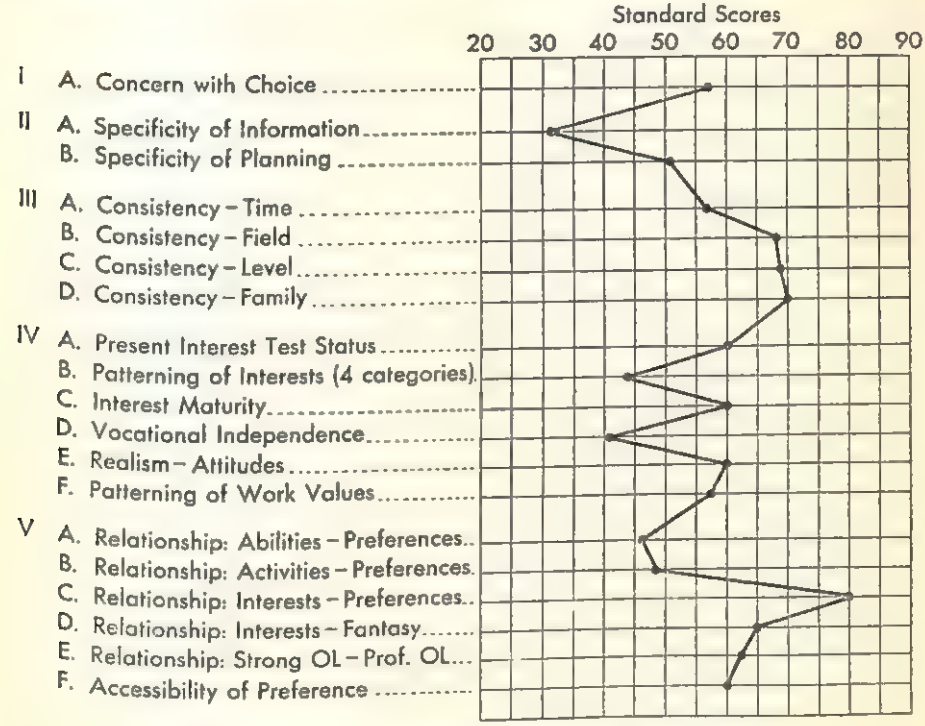

FIG. 4. VOCATIONAL MATURITY PROFILE OF JOHN DUNN
(*Actual or Estimated Scores*)

Indices of Vocational Maturity. The plan of the Career Pattern Study has been to develop indices of each of the postulated dimensions of vocational maturity. Since theory in this field is relatively new and untried, it seemed wise to develop a number of indices for each dimension, to ascertain the statistical independence and interrelationships of these indices, and thus empirically to refine the theoretical structure.

If such indices prove to be valid, it will then be meaningful to construct a vocational maturity profile like that illustrated in Figure 4. This is essentially the same type of profile as that provided by tests which give a series of scores which are best interpreted by examining their patterning.

The boy whose vocational maturity scores are shown on this profile is one of the subjects of the Career Pattern Study, studied first in 1951–52 when he was in the ninth grade and fourteen years old. The solid line indicates his scores as a ninth-grader. Most of the standard scores are approximations based on actual raw scores and actual distributions, a few are estimated from incomplete data, and a few are the actual standard scores. The profile is presented on this tentative basis for this one case, in the belief that it may be helpful to illustrate the type of data which will be made available and the type of interpretations which will be made possible by the use of the concept and indices of vocational maturity.

As the profile reveals, John Dunn is somewhat more concerned about vocational and related choices than is the average fourteen-year-old, being about three-quarters sigma above the mean on Dimension 1, Index A, Concern with Choice. He does not stand so high on Dimension 2, Information and Planning, in which area his status is in fact uneven; he is two sigmas below the average fourteen-year-old on Specificity of Information, whereas he is at the mean on Specificity of Planning. The implications are interesting, for here is a boy who is somewhat more concerned with choice than his peers, and who has done as much planning as they have, but who has done this planning on the basis of considerably less information about his preferred occupation than is typical at his age.

John makes a good showing on the Consistency Dimension. He did not change preferences during the course of this school year, and his preferences remained in the same general field, at the same general level, and in the same family of occupations.

In the fourth Dimension, Trait Crystallization, this boy's development is more uneven. While he was one sigma above the mean of his grade in his aptitude-interest development, as judged by a comparison of his ninth-grade scores with his twelfth-grade scores (Present-Ultimate Test Status) he had only secondary interest patterns (Patterning of Interests) as compared with the 67 per cent of the group who had primary interest patterns as judged by Darley's technique. This is the case although his Interest Maturity Score on Strong's Vocational Interest Blank is somewhat above the mean for his peers. Similarly, he is one-half sigma below the mean in so far as the Independence of his vocational behavior is concerned, despite the fact that his Work Attitudes are rather more realistic than are those of most boys his

age, and despite the fact that his Values system is rather well defined for his age.

In the fifth Dimension, Wisdom of Vocational Preference, John Dunn again shows rather uneven but on the whole favorable development. While his Abilities and Preference and his Activities and Preference agree about as well as do those of most of his peers, his Measured Interests and Preference agree much better than do those of his peers; even his Fantasy Preference (what he would like to do if he really could have his way) agrees well with his Measured Interests, the Level of his Preferred Occupation agrees well with his Occupational Level score on Strong's Vocational Interest Blank, and his Preferred Occupation is rather more accessible than is true of the preferences of his peers.

In summarizing the data on John Dunn it may be said that this boy is at or above the average of his grade group in vocational maturity. The one low point on his profile is his information about his preferred occupation; his vocational behavior (part-time and summer work and related experience) has not been as independent of the home as one would have expected in view of other indices; his abilities and preferenecs do not match quite so well as one might have anticipated in such a mature boy but they are not actually much out of line, and his interests are not as well differentiated as one might have expected. The boy might therefore benefit from counseling and exploratory activities which would give him more information about engineering (his preferred field of work), from help in getting and using work experience which would develop more independence, and from counseling and exploratory activities which would give him a better understanding of his occupational abilities and which might further refine and clarify his vocational interests.

VOCATIONAL DEVELOPMENT: IMPLEMENTING A SELF-CONCEPT

The choice of an occupation is one of the points in life at which a young person is called upon to state rather explicitly his concept of himself, to say definitely "I am this or that kind of person."

Similarly, holding and adjusting to a job is for the typical beginning worker a process of finding out, first, whether that job permits him to play the kind of role he wants to play; secondly, whether the role the job makes him play is compatible with his self-concept—whether the unforeseen elements in it can be assimilated into the self or modified to suit the self; and, finally, it is a process of testing his self-concept against reality, of finding out whether he can actually live up to his picture of himself.

If this is indeed the process of vocational choice and adjustment, then the nature of *vocational* development is clearly very similar to the nature of *personal* development, for the former is a specific aspect of the latter. In furthering vocational development a counselor furthers personal development, for he attempts to help the individual to develop and implement an adequate, satisfying, and realistic concept of himself. In order to do an effective job of vocational guidance the counselor must have a good understanding of the personal adjustment which he is trying to further. And in order to help with many commonly encountered problems of personal adjustment the counselor must have a good understanding of the tools, techniques, and resources of vocational guidance.

Vocational Counseling as Information-giving. The counselor, faced by a youth asking the question, "What kind of job should I enter?" has traditionally responded by making an inventory of the individual, matching abilities and job requirements, and helping the youth to make a survey of one or more appropriate occupations. This familiar procedure is as follows.

First, questions are asked, either in an interview or in a combination of self-analysis questionnaire and interview, about the counselee's home background, his health, education, leisure-time activities, work experiences, and vocational preferences. Aptitude tests are administered in order to appraise the student's intellectual ability, ability to judge spatial relations, and perceptual speed. An interest inventory may be used as a means of comparing the client's interests with those of persons successfully engaged in various occupational fields. The student's school record is reviewed, and all of these data are synthesized by the counselor to yield a picture of the student's assets and liabilities. The term, *individual inventory,* implies such a tallying.

After the individual inventory, or very often concurrently with it, comes the matching of individual assets and job requirements. This may be done in as formal a way as that proposed by the Minnesota Occupational Rating Scale (244), in which the student's psychological profile is compared with those of persons in various occupations to see which it matches best. Or it may, more often, be done subjectively by the counselor and client, in a review of the latter's occupational percentiles on the tests and of the possible vocational significance of his school, leisure-time, and work experiences, together with opportunities in pertinent fields.

Finally, in the usual procedure of vocational counseling, the counselor may help the student make a study of one or more of the occupations on which his attention is now focused. Sometimes the counseling process starts with this activity, as when a student in an occupations course begins with a

study of an occupation in which he is interested and proceeds after that to assess his aptitudes and his qualifications for work in that field.

All of this might be put more briefly by stating that vocational counseling generally has attempted to help the student or client to answer these questions: "What are my aptitudes and interests? In what jobs are they likely to be useful? What is the demand for such services? How can I prepare for, enter, and advance in such work?"

Implicit in the use of such methods of vocational guidance has been the assumption that vocational maladjustment is generally the result of lack of information about oneself or about the world of work. And it goes on to assume that the best way to promote vocational adjustment is to give people information about themselves and about occupations.

Now it would be folly to decry the importance of knowledge of oneself and of occupational requirements and opportunities. They are of vital importance. But to put exclusive emphasis on facts is to rely on the logical and rational tendencies of man, a trust which is not warranted.

This brings up another approach to guidance and to adjustment. It is an approach which developed largely outside of the vocational guidance movement, under the auspices of psychiatry, social work, and more recently, clinical psychology.

Vocational Counseling as Personal Counseling. According to this point of view adjustment is not so much a matter of *facts,* as of *attitudes.* Just how exclusively the emphasis is put on attitudes varies with the school of mental hygiene or psychotherapy, but at one extreme one finds many members of the nondirective school. They have expressed the belief that maladjustment is a matter of attitudes, and that problems of vocational choice and adjustment are problems of personal adjustment calling for psychotherapeutic techniques (271). And so, in contrast with classical vocational counseling, with its emphasis on facts, there is personal counseling, with an emphasis on emotion.

That many problems, including many which present themselves as vocational, are truly emotional in their origin and nature is well established. For this reason those who advocate what might be called a personal adjustment approach to guidance have described methods which are of considerable value to the counselor. A personal adjustment approach to counseling might be described as follows:

The counselor, told by the client that he, the client, is uncertain as to what type of work to prepare for, responds not to the intellectual content of the statement, but rather to the underlying feeling. Instead of responding to the problem, "what type of work," he reacts to the feeling of uncertainty.

The counselor's objective—and he has one even in so-called nondirective counseling—is to get the client to talk freely about himself and his situation. Although there is no systematic inventorying of the individual, the student talks about whatever aspects of his background, experiences, and aspirations he thinks are important. The counselor helps him to do this by showing him that he is interested in and respects him, that he understands how he feels, and that such feelings are not shocking or reprehensible. The result is an exploration by the client of his psychological self. This exploration of his own feelings and attitudes may bring about not only self-understanding, but a self-acceptance which releases the individual emotionally so that he is free to face facts and to deal with them more rationally.

Having come to terms with himself as he is, the client is ready to re-evaluate his aspirations, some of which no longer seem appropriate when examined in terms of his new self-understanding. With the help of the counselor in thinking through his feelings about them, they are discarded. Others do fit in and, after review, are retained. New values and goals emerge, are explored at some length in discussion, are rejected or accepted and woven into the fabric of the client's value system and his picture of himself.

Certain discrepancies between the student's picture of himself as he *is* and as he would *like to be* may stand out in his mind, and may not be removed by counseling. If the client has nevertheless developed a basic acceptance of himself, these are simply problems on which to work. In nondirective personal counseling the client usually decides at this point that he is ready to stop coming for counseling. He has worked through his feelings, developed some insights, and feels emotionally free to proceed on his own with the making and carrying out of plans in which the counselor obviously does not expect to share.

A schematic outline of the process just described might consist of the following. The client asks: "What sort of person am I?" and he explores his perception of himself; he asks: "What sort of person do I want to be?" and explores his ideal self; he asks, "How can I reconcile these selves?"; he relates his self-ideal to reality, and he reorganizes his self-concept to bring about a better self-integration. He emerges from this process a more self-accepting, self-understanding individual, with an integrated set of values which makes it easier for him to select goals and move systematically toward their attainment.

To many counselors the two approaches to vocational counseling are not really as antithetical as some of their exponents seem to believe. What has just been described are in fact the two extremes of one continuum, and in

practice the best vocational counseling is a combination of the two, somewhere between the theoretical extremes. People have feelings and attitudes concerning every aspect of their lives, therefore personal counseling must enter into vocational guidance. People who must make decisions about courses of training or about jobs deal with factual situations, and to deal with them adequately they must have the relevant facts, therefore vocational counseling of a rational sort also has a place. Good vocational counseling deals with both the emotional and the rational, according to the way in which these types of factors are important in each individual case.

Origins of Theories of Guidance. It may be worth while briefly to consider why it is that two such conflicting approaches to, and techniques of handling, problems of vocational choice and adjustment came into being. The origins of vocational and educational counseling are to be found in the public schools and in civic-minded citizens who saw the schools as the principal agency for the promotion of vocational adjustment. The early leaders were largely school people working in public schools. Teachers in their day were concerned with imparting facts and teaching skills. Vocational and educational counseling were therefore defined as "analysis of the individual, occupational study, and *true reasoning*"—true reasoning being counseling, helping the student to draw sound conclusions from facts about himself and from facts about occupations. This concept of vocational counseling was not limited to the Edwardian era, but is still widespread.

And now look at the origins of nondirective counseling, which emphasizes emotional factors. Its best-known exponent, Carl Rogers, was exposed as a graduate student to the thinking of Dewey, Kilpatrick, Thorndike, and Rugg. Little wonder that he was impressed by the importance of affective factors and assimilated the philosophy of the *child-centered* school. In him, it developed into a philosophy of *client-centered* counseling. He took this philosophy to clinics at Rochester, Ohio State, and Chicago, places where there were other centers which carried on effective programs of vocational and educational counseling and where his clinic specialized in personal or therapeutic counseling. The cases he saw were self-selected, generally appropriate subjects for his type of counseling.

Thus counselors with different approaches have tended to work with problems appropriate to those approaches. Each therefore tends to consider his approach the only valid one. However, a genuine understanding of individual development and of methods of counseling should lead to a realization that various approaches are valid in varying degrees in different situations. People are complex, many-sided creatures. As the particular combination of attitudes and needs presented by one client differs from that

of the next, so the degree to which counseling involves helping to get information and helping to develop a satisfying and integrated picture of the self varies. This brings us back to the main question: what sort of synthesis shall be made of these varying but important viewpoints?

Vocational Counseling as Aiding in the Development and Implementation of a Self-concept. In schematic form, and using the terminology used so far, a well-balanced approach to vocational counseling might help a counselee to ask and to answer the following questions, in something like this order:

"What sort of person do I *think* I am? How do I feel about myself as I think I am? What sort of person would I *like* to be? What are my values and needs? What are my aptitudes and interests? What can I do to reconcile my self-ideal with my real self? What outlets are there for me with my needs, values, interests, and aptitudes? How can I make use of these outlets?"

When phrased thus, the distinction between vocational and personal counseling seems artificial, and the stressing of one at the expense of the other seems uncalled for. When counseling a *person* about a problem of *vocational* choice or adjustment one does both personal and vocational counseling. A good vocational counselor uses information, and helps the client to make use of information concerning psychological, educational, and occupational matters; he also recognizes, and helps the client to recognize, the emotional factors that are operating.

Problems of vocational choice are to some extent emotional because, like parent-child, marital, or any other types of problems, they involve the self. *In choosing an occupation one is, in effect, choosing a means of implementing a self-concept.*

What does the implementation of a self-concept mean in practice? A specific case will help—that of Tom Turner.

A SELF-CONCEPT WHICH COULD NOT BE IMPLEMENTED

Tom Turner is a mining engineer. Before World War II, Tom was a talented young high school student in a manufacturing town. His special talents were academic, artistic, musical, but Tom was versatile and willing to try almost anything to get ahead. His father was a mill worker, there were younger children, and there was no money for higher education. So Tom looked around to see what kind of free education he might obtain. He tried for a scholarship at his state university, applied for another at a nearby school of mines, competed for still another at a local art school, and took exams for West Point and Annapolis. He didn't miss a

bet. He won a scholarship at the school of mines. He graduated with honors. He now wishes he had never won that scholarship.

Why? Some years ago Tom came to an awareness of the fact that he is not really adapted to a field engineer's life. Oh, he made good grades in engineering school, he has a good employment record, his company thinks well of him, and he has had several promotions. But he is unhappy because his dominant interests and some of his talents are not like those of the other mining engineers and mining company employees with whom he lives and works. When he goes home on vacation he visits with his brother and his brother's crowd, talks their shop talk with them and dreads the prospect of returning to his job. His brother and his crowd are musicians. Tom's few congenial acquaintances are among the eccentrics of the mining community. They include the company physician, a photographer, a hermit artist who lives alone in the hills, and an amateur musician cast in the role of preacher. And Tom, too, is an intellectual and an aesthete at heart. He spends hours in serious reading, he does some water-color painting, he has a collection of classical records; but his work is that of an engineer and administrator, he lives in a mining camp, he is a transient, and his colleagues are men of action, athletes, hunters, practical jokers. Tom just doesn't belong. The work he does, and the situation in which he does it, do not permit him to be the kind of person he really is and now knows he wants to be. His role expectations and his self-concept are not compatible. He is not an integrated person. He cannot make a reality of his self-concept.

Vocational counseling of the kind under discussion would have helped Tom to realize what kind of person he is much sooner than he did; it would have helped him to find appropriate outlets for his special abilities instead of letting his superior general ability lead him into an inappropriate field; it would have helped him to realize more clearly than he did what things he values most in life and in what types of employment these values might be found. It would have helped him clarify and implement his self-concept, and thus become an integrated, vocationally adjusted, and personally adjusted individual.

A REDEFINITION OF VOCATIONAL GUIDANCE

The foregoing discussion leads to the proposed redefinition of vocational guidance and development. *Vocational guidance is the process of helping a person to develop and accept an integrated and adequate picture of himself and of his role in the world of work, to test this concept against reality, and to convert it into a reality, with satisfaction to himself and benefit to society.*

14

APTITUDES IN VOCATIONAL DEVELOPMENT

The term "aptitude" is commonly used in conjunction with the name of some occupation or activity, as when we refer to mechanical aptitude, aptitude for teaching, medical aptitude, or clerical aptitude. But this use of the term is confusing, in that it suggests that there is a psychological entity corresponding to the term. Constructors of psychological tests have often seemed to act on this assumption in the naming of aptitude tests. Thus there are tests entitled tests of clerical, mechanical, medical, and teaching aptitudes. Users of tests in guidance, and clients seeking vocational counseling, often seem to make the same assumption concerning the existence of a psychological trait or factor which makes for success in each occupation.

But a moment's reflection should make it clear that this is not the case. Teachers, for example, are successful or unsuccessful for a variety of personal reasons. Some excel partly because their high degree of interest in their subject matter and their ability to organize and present it make them good expositors; others excel largely because their interest in people and their ability to communicate effectively with them enables them to establish a relationship which is favorable to learning; and others are effective for still other combinations of reasons. Similarly, success in clerical work, medicine, and mechanics are attributable to varying combinations of factors in different people, even though certain factors are particularly important in a given occupation.

THE NATURE OF APTITUDES

It is therefore more accurate, and hence more helpful in the study of occupations and of vocational adjustment, to define aptitudes as psychological factors, each relatively stable, unitary, and independent, which contribute in varying degrees to success in various occupations.

Stability. Since aptitudes are to some extent based on inherited characteristics, and the contribution which experience makes to their development is made in infancy and childhood, they tend to be stable during the adolescent and adult years in which vocational diagnosis and counseling are im-

portant. They are relatively uninfluenced by everyday experience, as will be seen more specifically later in the case of certain important aptitudes.

Potentiality. Aptitudes are capacities, potentials. That is, they enable one to learn. Thus a person with a high degree of an aptitude which is important in scientific work may be ignorant of the sciences, but should be able, other things being equal, to master scientific subject matter with relative ease.

Unity and Independence. Although aptitudes have been defined as unitary and independent, this does not mean that scientific developments have made it possible to measure one aptitude or factor without having that measure contaminated by other factors. For example, tests of verbal reasoning require that the examinee be presented with verbal material with which to reason, and such material can be presented only visually or orally, and be received only by seeing it or hearing it. To see it the examinee must read, which means that the reasoning score he makes is affected to some extent by his reading skill. If the material is presented orally, then the facility with which he receives oral communications of that type will affect his performance. In the case of abstract reasoning, the examinee may solve the problem by working with the abstractions alone, or he may substitute words for them to obtain the solution. In the latter case, the abstract reasoning test score is contaminated by verbal reasoning, and one finds that the two types of tests yield scores which are not completely independent of each other. The imperfection of methods makes it impossible fully to establish the independence of the aptitudes except by methods of factorial analysis, that is, by mathematical methods. This in turn means that it is not possible, except by factor analysis, to ascertain accurately the extent to which a given basic aptitude or factor is important in a given occupation.

The Varieties of Aptitudes. As methods of test construcion and analysis improve, and as experiments are planned and carried out in more adequate detail and on a larger scale, the list of aptitudes or psychological factors continues to expand. As has been pointed out in more detail elsewhere (313: Ch. 4), what were once believed to be unitary traits are found to be in fact complex. For example, intelligence was for long treated as an entity, for the very good reason that attempts to measure intelligence failed so long as they were based on presumed intellectual faculties, and succeeded only when Binet gave up the faculty psychology approach and sought to measure general intelligence. Thus the Stanford-Binet, the Otis, and many other established intelligence tests yield one score, for general intelligence. But during the past quarter-century work in the factor analysis of tests has led to the discovery that intelligence can, indeed, be broken down into more refined, relatively independent factors, all of which seem to involve reasoning

with symbols (hence the tendency to adhere to the concept of general intelligence in some circles), but each of which manifests itself somewhat differently according to whether the symbols are verbal, numerical, or spatial.

The best-established psychological factors are represented in psychological practice by appropriate tests, but some of these have not been widely used in occupational research. Establishing the existence of a trait in a scientific investigation is by no means synonymous with establishing its role in everyday life. Furthermore, the very purity and unitary nature of a factorial test results in its having less practical value for occupational prediction than some tests which are not factorially pure, but whose mixture of factors is appropriate for a given occupation. For example, so-called mechanical comprehension tests are impure, they actually measure several different factors, one of which is usually spatial visualization, the ability to judge shapes and sizes, another of which is usually mechanical information or experience. Mechanical comprehension tests usually give better predictions of success in mechanical training courses than do either spatial visualization or information tests, for the obvious reason that two good predictors are better than one.

In the balance of this chapter, then, we shall first briefly mention the best established and best understood psychological aptitude factors, and then proceed to examine in more detail what has been ascertained concerning vocational success by means of psychological tests. The bulk of the chapter will therefore have an organization which is practically useful but not theoretically defensible, an organization which is simply a compromise until the best theory is translated into practice. More extended treatment of these topics and tests, with complete documentation, will be found in *Appraising Vocational Fitness* (313: Ch. 6–15).

Verbal reasoning may be defined as the ability to use verbal symbols, to manipulate them and to see relationships between them. Verbal analogies tests well illustrate the process involved, in items such as the following:

Night is to *day* as *black* is to ———

A. ink, B. color, C. paper, D. white, E. brown.

The reasoning process here involves, of course, recognizing or determining that the relationship of the first two underlined words is one of opposites, and then of ascertaining the opposite of the third underlined word, which is white, in the list of choices provided. There are many forms of verbal items which can be used to tap these mental processes.

Numerical reasoning is substantially the same type of ability, but the medium is numerical rather than verbal. To a person who has never studied arithmetic this is, of course, not a reasoning test, just as one who does not

know English would be unable to succeed at the verbal reasoning task, for he does not have the tools with which to do this kind of reasoning. On the other hand, the person who has had enough schooling to be able to use these tools finds that these are reasoning tests.

Abstract reasoning requires the use of abstractions or symbols which are less commonly used to convey ideas than are words and numbers. Geometric figures are often so used, the shapes and sizes being manipulated just like words and numbers. The fact that reasoning of the same type is basic to these three verbal, numerical, and abstract (spatial) reasoning factors leads to their being significantly related to each other and to their being combined in general reasoning or intelligence tests in many practical situations.

Spatial visualization is a third factor which has been isolated in theoretical studies and put to some use in practice. It differs from abstract (spatial) reasoning in that the process is not one of understanding analogies which happen to be expressed in spatial form, but rather one of judging the relationships of shapes and sizes, and particularly of manipulating these mentally to bring about new arrangements of parts to match one of several possible wholes. To varying degrees spatial perception and mental manipulation are involved in tests which attempt to measure this factor, but the essential process is mental manipulation, moving parts together, turning one or more of them around or over.

Perceptual speed has also been well established as a psychological factor. It is the ability quickly and accurately to recognize similarities and differences among presented objects, whether these be pairs of words, pairs of number series, or multiple sets of these or other symbols such as geometric figures. The type of symbol seems to make a difference here, as in reasoning; speed and accuracy of word recognition is partly a function of reading, whereas number perception is less so. Verbal and numerical perceptual speed tests are typically made up of items such as the following:

Smith and Co.—Smythe and Co.
Parks and Brown—Parks and Brown
39764—39764
78935—78395

In each case, the judgment must be made as to whether the two items in a pair are identical or different. This process has been shown to be one of perception, not one of reasoning.

Dexterity of fingers, of wrists, and of arms and hands, have been found to be relatively independent factors. They may be thought of as eye-hand coordination, which makes them seem more psychological in character than does the term dexterity. But in any case, ability quickly and accurately to

perform fine manual and gross manual tasks are distinctive aptitudes. They can be measured by having the examinee place small pins in a series of holes as quickly as he can (finger or fine manual dexterity), or by having him use both hands in placing disks in holes and turning them over in the process.

Combinations of factors which often go together, and combinations of one or more aptitude factors with factors of experience, or of interest, or of personality often make more immediately useful tests than do pure factorial tests. We have seen that such was the case of intelligence as contrasted with the verbal, numerical, and abstract reasoning factors. This is often true of mechanical comprehension. It seems to be true of aesthetic judgment. Thus in what follows we will be concerned sometimes with a single factor, sometimes with a constellation of factors which seem to work together often as teams.

INTELLIGENCE

Intelligence has been defined in a variety of ways, but may appropriately be thought of as the ability to learn in school, for this was the criterion used in selecting items and in developing the first successful tests of mental ability. Hence they are often called tests of academic ability. Even more operationally, intelligence may be defined as ability to use symbols, to reason with abstractions such as words, numbers, and signs.

Assessing Intelligence. Reasoning ability may be assessed by observing behavior, for reasoning is what reasoning does. Thus when a human child and a grown chimpanzee try to get a banana which is out of reach, and fail, and the human gives up while the chimpanzee gets a box, stands on it, and gets the banana, we say that the adult chimpanzee has more ability to reason than does the human child. But observing behavior which calls for reasoning and making inferences concerning reasoning is full of pitfalls. The child may not have been very hungry, or may never have seen a banana, while the chimpanzee may be very hungry and may have been taught to stand on boxes to get bananas. Hence the virtue of tests: they systematize both the situations in which observations are to be made, and the methods of making and recording the observations. Individual intelligence tests like the Stanford-Binet and the Wechsler-Bellevue Scales are clearly task-observing situations; group tests like the Otis, the Wesman, the long-used American Council on Education Psychological Examination, and the three Reasoning Tests of the Differential Aptitude Test Battery are somewhat different, in that behavior is observed primarily through responses

recorded on paper by the subject. But even making a pencil mark is behavior.

The Role of Intelligence. Intelligence is related to the occupational level aspired to: that is, the brighter the individual, the more likely he is to aspire to higher level occupations, and the duller he is, the more likely he is to be interested in a lower level occupation. Ability seems to find outlets which are appropriate, occupations in which it can be used. Since information and opportunities are often inadequate, however, some people aspire to inappropriate levels.

Aspirations are related to intelligence despite interference by social pressures. The brighter the individual, the greater are his chances of aspiring to an appropriate occupation, whether appropriateness is judged in terms of intelligence requirements or of interests (296, 366). This is fortunate, and it is what one would anticipate since intelligence is reasoning ability. Since, however, other factors also affect aspirations, the relationship is far from perfect. Social pressures, it will be remembered, tend to make people aspire to unduly high levels or inappropriate types of work, while in some subcultures they tend to downgrade ambitions. The brighter individual who is affected by the social pressures which prevail in most of urban America is likely to be realistic in his level of aspiration, whereas the equally suggestible but less intelligent individual is likely to be unrealistic. It may not be just because of his intellectual ability that the brighter person makes a wiser choice.

Entering training may be viewed as making a choice, and since even high school curricula are prevocational, enrollment and success in types of schools may perhaps be viewed as entry into or success in an occupation. Curricula vary in difficulty. For instance, studies have shown that the typical academic curricula of high schools have students whose intelligence quotients average about 115, while those of trade school students tend to average about 90. Similar differences are found among the various schools of any university, with science students generally high, business students lower, and agriculture students still lower.

Even within the same type of curriculum, schools and colleges vary. Thus in a typical year, the American Council on Education Psychological Examination for College Freshmen, administered in some 300 colleges, yielded median scores which correspond to a median IQ of 94 in the lowest ranking college and to a median IQ of 122 in the highest ranking college in the group. This means that one-fourth of the freshmen in the lowest ranking college had IQ's of less than 90, whereas in the most selective colleges there are none at the level and the majority have IQ's of 120 or more. While an

IQ of 110 may be thought of as the minimum desirable for college-going students, considerable caution therefore is needed when considering a student's prospects in high school or college. The question has to be asked, which high school, which college? It is also necessary to ask, since college graduation is not actually tantamount to entry into an occupation, whether the kind of college to which the individual might go is one which will help him with entry into his preferred type of work.

Placement is a more severe test of occupational success than training, for reasons just seen. But studies of the relationship between intelligence and job getting in young persons have yielded results which at first surprise and then seem reasonable—there is no relationship. Given merely a youth's intelligence, one cannot predict with any degree of accuracy, even when jobs are scarce and difficult to get, whether or not he will get a job soon after leaving school. This does not seem so surprising, however, when it is remembered that on entering the labor market youth is not ready for regular jobs, finds instead a series of short-lived "entry," often blind alley, jobs. These jobs do not require mental ability in any high degree, and the employer is likely to look for other more obvious signs of readiness to handle a job (83, 186).

In adults, on the other hand, intelligence is related to placement and to having a job. When the working force must be reduced, the less able workers are the first to be released (243), and when workers are being employed, even without benefit of tests, the employer's judgments of employability on the basis of work histories take into account aspects of performance which reflect intelligence (223, 243).

Success in the world of work, as judged by place reached on the occupational ladder, is related to intelligence. The brighter people tend to be found in the higher level occupations. This is demonstrated both by Army data from the two world wars, in which adults were tested and their civilian occupations ascertained (112, 300), and by the follow-ups of persons tested in childhood whose later adult occupations were related to their earlier test scores (252, 331). In her analysis of World War II data, for example, Stewart found that truck drivers averaged 86 on the Army General Classification Test (standard score), while cabinetmakers made scores averaging 108 (about average for adults), and accountants averaged 129. In Proctor's thirteen-year follow-up of former school children, the mean IQ's were as follows:

Occupation	*Mean IQ*	*Occupation*	*Mean IQ*
Professional	115	Clerical	104
Managerial	108	Skilled	99
		Semi-skilled	97

It must be recognized, again, that other factors also play a part. Since parental socioeconomic level, for example, also affects the occupational level attained by the child, and since intelligence is related to socioeconomic level, it is theoretically possible that socioeconomic level is the cause of *both* intelligence test score and occupational level attained. It is also possible, of course, that inherited intelligence is the cause of both parents' socioeconomic level and child's occupational level, but this type of causal connection is less generally accepted now than it was a generation ago. It seems likely, in fact, that there is actually interaction, with intelligence affecting the attainment of status and status affecting the development of intelligence. If so, we may accept the most obvious implication of Proctor's data: childhood intelligence does give some indication of the occupational level likely to be attained in adulthood.

Success in the occupation has not been found to be related to intelligence, in most occupations in which it has been expected to be a determinant. Intelligence has been found to be related to success in certain limited operations, such as output in machine bookkeeping (144), but not in more complex executive, scientific and professional occupations into which a greater variety of factors enter. This surprising result has been obtained, however, largely in studies of members of an occupation employed in one organization or type of organization. Intelligence tests are given to executives in one corporation (33), to teachers in one system, and to salesmen in one company, and the results fail to reveal any relationship with rated usefulness to the organization, rated performance on the job, or volume of sales. This could be due to the fact that company standards are such that only those with the necessary ability, as shown by previous experience, college records, and the like are employed in the first place; additional increments of mental ability may not be important, if only one is bright enough to master the work. Success may then depend on other factors which are not so easily judged in hiring.

Another reason may also help explain this fact. Entry into the occupation, quite apart from employment by a given company, may be enough of a screen to keep out those who do not have sufficient ability to do the work. To become a teacher or engineer, for example, one must master the subject matter of college courses, so that college graduation may insure the necessary ability. If the individual has mastered the content of his field, other factors may affect success more than intelligence. There is some support for this interpretation in the studies of scientists conducted by Roe (264, 265), for she failed to find any significant differences in the intellectual levels of eminent and less eminent biologists: the differences seemed to lie in motivational factors. Intelligence played its part, evidently, in determining whether or not one became a biologist.

It would be important, in this connection, to explore the intelligence vs. success-in-occupation relationship with another type of research design and another type of criterion. If success in the occupation were defined in terms of the type of situation in which the individual found employment, and people in these various gradations of employment situations were tested, differences would probably be found which would demonstrate a relationship between intelligence and success. It may be, for example, that teachers in school systems with good working conditions (pay, equipment, type of pupil and parents, administration, etc.) are brighter than those in poor school systems. It may be that executives in corporations which are "good to work for" are brighter than those in corporations in which there is less opportunity for advancement, self-realization, or the other good things of life. Such differences have not been demonstrated, but they do seem altogether likely.

Advancement is still another criterion of success in an occupation or in an enterprise, and one which has been found to be related to intelligence. In the Aetna Life Insurance Company, for example, Pond and Bills (249) found an increase in the correlation between intelligence and difficulty of job held which rose from .22 to .41 over a period of two and one-half years. As time passed after hiring, the more able workers moved to more demanding jobs, the less able either remained in or moved to less demanding positions. Ability to make complex judgments and to plan ahead results in advancement to higher level jobs.

Satisfaction, we have seen, is an aspect of adjustment which deserves attention just as does success. Intelligence affects job satisfaction, as shown by the fact that workers who are brighter than most of those in that work, or brighter than the nature of the work requires, tend to quit for higher level jobs, whereas those who are less intelligent than their fellows or than the work requires are likely to feel the strain of competition even if they are able to hold on to their jobs. One large department store found (10), for example, that the brightest employees tended to resign from the packing department, while the least able remained—and this was the department the store had thought of as that which would bring young workers into the store who would in due course rise to key positions! It was concluded that the work held too little challenge for bright young people, and could be thought of as an entry job only if promotion plans were well known by employees and if advancement came surely and rapidly enough to the able for them to consider it worth waiting for. The evidence of dissatisfaction as a result of being marginally intelligent in a job is not so convincing, coming from casual observation and case histories. But it makes theoretical sense.

Conclusions about Intelligence. From all of the above, it can be concluded that:

1. People tend to gravitate toward occupational levels and toward jobs appropriate to the level of their intellectual ability;

2. Given intelligence above the minimum required for entry into an occupation, additional increments of intelligence do not make for greater success (as usually defined) in that occupation. However, intelligence may be related to success in the occupation, when judged by the desirability of the employing situation;

3. In routine occupations, whether manual or clerical, intelligence may be related to the speed with which initial adjustments are made on the job, and is related to advancement to positions of greater responsibility, but is not related to success on the job itself once the learning period is over or the appropriate responsibility level is attained.

PERCEPTUAL SPEED AND ACCURACY

Perceptual speed and accuracy, we have seen, is one of the aptitudes which have been isolated by factor analysis. It has, unlike most other relatively pure factors, been the principal and almost sole component of certain aptitude tests which have been widely studied in relation to vocational adjustment. Speed and accuracy in the perception of similarities and differences in combinations of words and numbers was one aspect of early clerical aptitude tests, and formed the basis of some even before factorial studies had established its independence. Tests of this aptitude are therefore often called tests of clerical aptitude, and the factor itself is sometimes called that because its practical significance is largely in that area.

Perceptual speed is somewhat related to general intelligence, significantly when names or words are involved because of the role of reading ability, but not appreciably when numerical symbols are used. In groups that are heterogeneous in intelligence the relationship to intelligence is more noticeable than in groups of about the same intellectual level, which makes this aptitude most important in the latter type of situation. It is relatively uninfluenced by life experiences (313:165–166).

Assessing Perceptual Speed. There is a tendency, in this type of clerical task, for individuals to work at the speed at which they are accurate. This means that speed scores tend to differentiate more adequately than do error or accuracy scores. Since speed is important, precise observations are called for. The best way to obtain precise observations is through measurement, and this means testing. Widely used and rather well studied and understood

tests of perceptual speed and accuracy are the Minnesota Clerical Test, and the Clerical Speed and Accuracy Test of the Differential Aptitude Tests.

The Role of Perceptual Speed. It might be expected that people who have a given aptitude in a high degree would want to find an outlet for it, would aspire to a type of work in which that aptitude might be used. This implies that there is a dynamic quality in aptitudes. Whether or not such an assumption is warranted is not known, although it has been seen that people tend to gravitate toward occupations which are appropriate to their general aptitude (intellectual) levels. In the case of perceptual speed and accuracy evidence is completely lacking, but it seems likely that when other aptitudes, such as verbal reasoning, exist in a high degree they would have more of this hypothetical dynamic quality than would perceptual speed, and so would have more influence on aspirations. It is easy to conceive of a person with high verbal ability enjoying the use of words, for this kind of enjoyment is frequently observed and experienced, but it is not so easy to imagine someone who has a high level of perceptual speed making quick discriminations just for the sheer pleasure of it!

Choice, as shown by entry into a training program, is related to the possession of this aptitude. Business students tend to have a higher degree of perceptual speed and accuracy than do students of other subjects. *Entry* into related work also appears to be affected to some extent by possession of this aptitude, for success in clerical training is somewhat related to perceptual speed and accuracy (11, 327). Whether or not getting a beginning job in clerical work is related to degree of "clerical" aptitude has not been ascertained.

Success in the world of work does seem to be affected by perceptual speed and accuracy, at least in so far as clerical and office jobs are concerned, for the more prestigious and better paying clerical jobs are held by persons who have more of this type of aptitude (243). For example, bookkeepers surpass stock clerks, and are in turn surpassed by accountants. If success is judged by being able to keep a job when working forces are being reduced, then again this aptitude is important, for clerical workers released early in a depression have less perceptual speed than do those who are retained (11).

Success in the occupation is also affected by clerical aptitude of this specialized type, as shown by supervisors' ratings of their clerical employees in the Minnesota studies (11), by the volume of clerical work correctly handled by employees in banking and other clerical jobs (144, 298), and by Barnette's study (19) of high and low achievers.

Advancement in the specific occupation, however, seems unrelated to per-

ceptual speed (72). Intelligence and other factors seem to be more important, given enough of this rather specialized aptitude to handle the work.

Satisfaction in relation to perceptual speed has not been studied. Presumably a person who lacked the speed required for keeping up with the pace of the job, or who was just barely able to maintain it, would feel frustration and failure, would be tense about his work, and hence dissatisfied with it; that one who has an excess of this aptitude, in relation to the demands of his job, would be dissatisfied is not so self-evident, unless, like the bookkeeper's assistant described in an earlier chapter, he finishes the work so quickly and is then so limited in choice of activities that boredom sets in.

Conclusions about Perceptual Speed. Perceptual speed and accuracy affect the level of clerical work for which the individual is likely to be able to acquire the necessary training, and the level at which he will be able to hold a job. It affects the degree of success he attains on the job, as judged by supervisors' ratings and by output. But there is no evidence that it affects the earning of promotions in a given clerical field. It may affect job satisfaction in clerical work, but this is a matter of inference only.

MANUAL DEXTERITIES

There are several varieties of manual dexterities, depending upon the anatomical parts involved. In particular, we have seen that fine manual (or finger-wrist) dexterity and gross manual (or arm-hand) dexterity have been well established in factorial studies. In popular usage these are often confused, the assumption apparently being that a dextrous person is generally dextrous. Actually, these dexterities are independent of each other.

Assessing Manual Dexterities. Manual dexterity can be assessed by observing the speed, co-ordination, and integration of movements made by a subject, or by giving him a standard task to perform, the essential operation of which involves manual manipulation. In the latter type of situation the advantages of objectivity hold, and test-based studies of manual dexterities provide a scientific basis for this discussion. Typical tests of fine dexterity are the O'Connor Finger and Tweezer Dexterity and the Purdue Pegboard; typical of tests of gross manual dexterity is the Minnesota Rate of Manipulation Test.

Role of Manual Dexterities. Like perceptual speed and accuracy, manual dexterity has not been investigated in relation to occupational preference nor in fact is anything known about its relation to choice of occupation. While it would seem logical to assume that people who have a high degree of manual dexterity would enjoy using it and therefore seek to use it, and that those

who lack it would avoid situations which call for such aptitudes, this is at present no more than an assumption.

Entry into occupations is related to manual dexterities in some fields but not in others in which it has been expected to play a part, if success in training is considered getting over the entry hurdle. Manual dexterity is related to success in training for certain semi-skilled occupations, for example those of packers and wrappers in department stores (40) and of power sewing machine operators (234). It is not related to success in skilled technical or professional training in such occupations as aircraft mechanics (163), art (335), and dentistry (335). In these latter fields a minimum of manual dexterity is presumably required, but given that minimum, as in the case of intelligence, other factors seem to be more important.

Success has been studied in relation to very few occupations. *Gross* manual dexterity has been found in Blum and Candee's work (40) to be related to the output of beginning semi-skilled workers such as assembly workers and packers, but not to their long-term output. Apparently it helps in mastering the new work routines more rapidly. Contrary to the expectations of many, gross manual dexterity plays no part in success in office work, despite the amount of manipulation of papers, files, etc., by clerical workers. Interestingly, clerical and semi-skilled workers do tend to possess superior degrees of gross manual dexterity, whereas skilled workers do not. In the case of *fine* manual dexterity the relationships are somewhat different. Fine assembly jobs, such as those of watch and meter assembly, require this type of dexterity for superior achievement (39), but no other relationships have been established. Clerical workers, skilled craftsmen, professional people who use their hands (e.g., dentists), and fine assembly workers tend to have a higher degree of fine manual dexterity than do other people, but in most of these fields it seems to be a matter of having enough of the aptitude to function, after which other factors are the determinants of success.

Satisfaction may be affected by manual dexterities in the same manner as it is by intelligence, but one can only infer this from observed instances of men and women whose work is not manual and who develop manual hobbies because, as they say, they like to use their hands. This may or may not indicate that there is satisfaction in using existing aptitudes, and dissatisfaction in not using them, for other factors may underlie the choice of activity.

Conclusions about Manual Dexterities. One may summarize what has been said above concerning the role of manual dexterities in vocational adjustment as follows. Manual dexterity is actually a plural entity: we must think in terms of dexterities. Recognizing this, manual dexterities are important to entrance into and continuation in certain occupations at the

semi-skilled and professional levels, and perhaps at the skilled and clerical levels, and they affect the rate of mastery of manual routines, but they play little part in the attainment of success after the initial induction stage.

SPATIAL VISUALIZATION

The ability to judge shapes and sizes, to manipulate them mentally, is another factorially established aptitude which has long served as the basis for psychological tests used in vocational research, guidance, and selection. Frequently included in intelligence tests because of the role which reasoning can play in the solution of spatial problems, this kind of task can be so set up that it emphasizes reasoning (as in analogies tests) or so that it emphasizes visualization. In the latter type of task, the individual who solves problems by visualizing and manipulating gets more correct solutions in a given amount of time than does the subject who relies on reasoning processes.

Assessing Spatial Visualization. As a highly specialized mental process, this aptitude is much better assessed by means of test than by observational methods. Widely used tests are the Minnesota Spatial Relations Test, the Minnesota Paper Form Board (Revised), and the Spatial Visualization Test of the Differential Aptitude Tests.

Role of Spatial Visualization. Whether or not ability to visualize spatial relationships plays any part in the development of preferences for or interest in any type of occupational activity is not known, but if aptitudes are dynamic, in the sense of seeking appropriate outlets, it would be logical to expect such a role. Spatial visualization does apparently play a part in determining choice of occupation, as shown by the fact that entering engineering and art students surpass other college students in this type of aptitude (20).

Entry into occupations has been believed to be related to possession of this type of aptitude for, although education seemed to have no effect on this factor, students who are about to complete training in art or engineering—a prerequisite to entry—have more ability to visualize spatial relations than do those who are beginning training and have not been screened by the training process. Since recent evidence suggests that engineering training affects spatial scores, this belief is perhaps open to question (34). Whether job getting is affected by this aptitude is unknown.

Success in the world of work, as shown by type and level of job held, is related to spatial visualization. Men and women in scientific, artistic, technical, skilled, and certain types of semi-skilled jobs tend to possess unusually high degrees of this type of aptitude. Engineers, artists, industrial arts teach-

ers, garage mechanics, ornamental iron workers, and assembly workers doing complex hand work, are illustrative of groups who excel in spatial visualization. In some of these skilled and semi-skilled jobs, at least, spatial visualization is related to supervisors' ratings of success on the job. Inspector-packers, machine operators, job setters, toolmaker apprentices, and power sewing machine operators are such occupations.

Satisfaction again is an unknown quantity, and the remarks made concerning manual dexterity are applicable here also.

Conclusions concerning Spatial Visualization. Ability to judge shapes and sizes, to visualize spatial relationships, is an aptitude which is important to success in a variety of technical occupations at all socioeconomic levels, including engineering, art, dentistry, toolmaking, job setting, aircraft engine inspection, inspecting and packing merchandise and manufactured goods, power sewing machine operation, and electrical assembly work. It is important also in the supervision of similar jobs. The part that it plays in the development of preferences and in satisfaction is, at present, strictly a matter of inference.

MECHANICAL COMPREHENSION

Mechanical comprehension is a useful concept, operationally, but is actually a composite "aptitude" rather than a unitary psychological factor. It consists of varying combinations of spatial visualization, perceptual speed (spatial), reasoning, and mechanical information or experience. It has proved practically useful to treat these as one in test construction and in guidance, because, as pointed out early in this chapter, mixed tests give better predictions than any single pure test, if the mixture is appropriate.

Assessing Mechanical Comprehension. Mechanical comprehension can be assessed by watching a subject at work at a relatively unfamiliar mechanical task, and observing how quickly and accurately the subject diagnoses the problem and plans and carries out his solution. Thus work samples, or standard tasks, have been set up in electrical shops, machine shops, etc., with such appraisal in mind (177). More objectively, these standard tasks may be reduced in scope and more rigidly standardized, so that the way in which the subject solves the mechanical problems is revealed by the number of right answers or solutions. The Minnesota Mechanical Assembly Test is a standard test of this type and uses mousetraps, mechanical pencils, and spring clothes pins as materials presenting mechanical problems. The same principle has been used in paper and pencil tests, one of the best known and most thoroughly studied of these being the Bennett Mechanical Comprehension Test.

Role of Mechanical Comprehension. Ability to grasp and apply mechanical principles is related to the development of interest in mechanical and scientific activities, as shown by the correlations of mechanical comprehension and interest tests. Whether this means that interest leads to development of the ability, or that having the aptitude leads to the development of the interest, is unfortunately not clear; in fact, it is not unlikely that both are the case. It is established, however, that choice of curricula is related to the degree of mechanical comprehension, for technical students, and applicants for technical training, surpass other groups in this type of aptitude as measured by the Bennett and O'Rourke tests.

Entry into certain occupations is also related to mechanical comprehension, for those who stand high in this respect get better grades in technical training, and are more likely to graduate, than are those who rate lower. This has been found to be true in both civilian and military schools.

Success in occupations also is related to mechanical comprehension, for persons employed in scientific and technical professions make higher scores on mechanical comprehension tests than do those in nontechnical fields, and these occupational groups also stand higher than do persons in skilled or semi-skilled technical occupations, even though these persons in turn are superior to those in nontechnical fields at the same levels (313: Ch. 10). Engineers, industrial art teachers, machinists, garage mechanics, firemen, machine operators, and inspectors, typically have more ability to grasp and apply mechanical principles than do their nontechnically employed peers.

This ability plays a part, also, in success in a particular type of employment. The higher the degree of mechanical comprehension, the greater the degree of success in work such as that of machine tool operator, job setter, and related fields.

Satisfaction, again, has not been studied in relation to this aptitude, despite the intriguing hypotheses which might be set up concerning self-realization and satisfaction.

Conclusions concerning Mechanical Comprehension. From what has been seen above, we may conclude that mechanical comprehension is likely to play a part in entry into and success in any occupation in which understanding machines and equipment is essential. This is true of high level technical occupations such as engineering, intermediate level fields such as toolmaking, and even of lower level jobs such as machine operation—when the operation requires some understanding rather than mere machine tending.

AESTHETIC JUDGMENT

Aesthetic judgment resembles mechanical comprehension in that it is an aptitude which was first established on logical rather

than scientific grounds, and that work at once proceeded on the development and validation of an appropriate test. It differs in that this aptitude has not been subjected to factor analysis, so that it is not known whether or not it belongs in the list of unitary psychological factors. It may turn out to be a composite of spatial visualization, experience, and something else, or it may stand as a distinct factor. In the meantime the concept and the related instruments have value in providing improved understanding of success in one field of work.

Assessing Aesthetic Judgment. Aesthetic judgment is the ability to judge the quality of composition, to distinguish the more pleasing from the less pleasing in shape, form, and relationship. Ability to distinguish the more from the less pleasing aesthetic arrangement can be judged in many life situations, as in the arrangement of furniture, the choice of clothes, and the organization of a sketch. It can also be judged, with greater reliability, by means of standard tests. For example, the Meier Art Judgment Test presents the examinee with a series of pairs of pictures, the two members of each pair of which are identical except for some detail of form or composition; the examinee chooses the more pleasing of each pair.

Role of Aesthetic Judgment. Because the obvious use of this type of test is for artistic occupations, because the aptitude it measures is presumably limited to such occupations, and because this is presumably only one of the characteristics which make for success in this one field of work, there have been relatively few studies of the role of aesthetic judgment in vocational adjustment. It has been ascertained in Meier's work, reported in the norms and manuals for his tests, that artists surpass art teachers, art teachers surpass art students, and art students surpass other students, in this aptitude, and there is evidence which suggests that these superiorities are not the result of training. Art students who have the highest degree of aesthetic judgment tend to get better grades and to be considered better artists, than those who have least aesthetic judgment.

Conclusions concerning Aesthetic Judgment. There appears to be a special aptitude, significant at least in artistic occupations, which can be called aesthetic judgment. The higher achievement levels within art occupations are characterized by higher levels of aptitude. Whether or not it plays any part in other occupations is not presently known.

MUSICAL TALENTS

There is reason for believing that, although musical achievement is due to a variety of factors, there are certain basic psycho-

physical capacities which are of fundamental importance in musical success. These were defined and measured in a series of studies continuing over a period of years under the auspices of Carl Seashore of the University of Iowa, and in related work by others. Seashore preferred, as a result of his research, to use the term "musical talents," and was considerably more cautious in his claims in later years than in his earlier work, but his data still led to the conclusion that there are highly specialized aptitudes such as sense of rhythm, tonal memory, and sense of pitch which are not appreciably influenced by life experiences and which are related to success in music.

Assessing Musical Aptitudes. Although observations of musical aptitude must of necessity be based on some kind of musical performance, which in turn depends to some extent on training and experience, the psychophysical capacities under discussion here can be assessed without training and experience playing a major part. Granting that the examinee knows what pitch is, has concepts needed for judging whether the second musical note he hears is higher or lower than the first, it is possible to present him with a series of recorded pairs of notes, asking him to note after each pair whether the second is higher or lower. Tests of essentially this type are available for six different musical "talents" in the Seashore series.

Role of Musical Talents. Musical capacities, like aesthetic judgment, have been studied almost entirely in relation to success in training and in work in the clearly relevant field of work. Students who stand high on a number of these capacities tend to make better grades in music than do those who stand low, and are more likely to succeed in musical training in institutions such as the Eastman School of Music (297). Musicians are characterized by higher levels of talent than are music students, who in turn surpass people in general. These psychophysical capacities are probably important also in certain other occupations in which special types of auditory acuity are critical, for one of them was found to be related to ability to handle one of the submarine detection devices which was developed late in World War I, before other procedures were devised which replaced the human ear.

Conclusions concerning Musical Talents. Although of virtually unexplored significance in other fields of work, there are certain psychophysical capacities which play a part in acquiring competence in music. They may be viewed as basic aptitudes, at least a minimum of which are essential to success, but which constitute only a limited sample of the characteristics which make for varying degrees of success.

CONCLUSIONS ABOUT APTITUDES

Aptitudes may be general and far reaching in their effects on vocational development, as is true in the case of intelligence or, more specifically, reasoning; or, on the other hand, they may be specific, limited in their known effects to certain fields of work as in the case of perceptual speed and accuracy. Some aptitudes, such as spatial visualization, may have a bearing on the development of vocational preferences, in this instance technical and scientific occupations, but others, such as perceptual speed and accuracy, appear to have no such significance. Special aptitudes have some predictive value for occupational choice in the sense of entry into occupational training or employment, and they are most closely related to success in training. This is as should be expected, in view of the fact that aptitude means ability to learn. It is relevant that intelligence is also known as scholastic aptitude.

Special aptitudes have less bearing on occupational level attained, but occupational level is to a considerable extent dependent on general aptitude, i.e., intelligence. The relationship of aptitudes to success in occupations, once trained for and entered, varies with the complexity of the work. If success is evaluated by performance of a task for which the aptitude in question is crucially and primarily responsible, the test *ipso facto* has predictive value, but if the task performed is a complex one other factors are likely to affect success, and no one *special* aptitude is likely to have much relationship to success in its performance. Thus perceptual speed and accuracy is related to the number of correct entries made per hour by machine bookkeepers, but fine manual dexterity is not related to success in dentistry. Given enough manual skill to pass laboratory courses, what makes the difference in dentists is what they know and how well they apply it.

Advancement in the occupation is variously related to special aptitudes, again depending on how central to the occupation are the tasks which require the aptitude; general intelligence is relevant if advancement means increasingly complex tasks, e.g., supervision. Aptitudes and satisfaction in work have not been studied sufficiently for generalizations to be made. One can only hypothesize that doing work for which one has marginal aptitude must result in some discomfort and strain, for this does seem to be true of intelligence; excessive aptitude appears to make work lose its interest. The role of aptitude is most often one of determining the ability of the individual to get over the initial hurdles of training and induction, other aptitudes and traits then becoming critical. Much more is known about the role of aptitudes in training than about their roles in the development of voca-

tional preferences or in achieving satisfaction in occupations. Indeed, more is known about their role in training than about their role in achieving success in the work itself. Despite these gaps in our knowledge of aptitudes and their occupational significance, a considerable body of knowledge has been accumulated which makes possible a better understanding of the dynamics of vocational development.

15

INTERESTS AND VOCATIONAL DEVELOPMENT

When aptitude tests such as those designed to measure general intelligence and mechanical aptitude were first found to give but imperfect predictions of vocational success, the readily found explanation was that aptitude was only one factor, that other factors, and particularly motivation, were also important. The problem then was to define these other factors, to translate concepts such as motivation into something operational that could be observed and, if possible, measured. It was one thing to study motivations in rats, which could be presented with standard obstacles to overcome under varying conditions of motivation, such as crossing an electrified grid to obtain food when hungry and when satiated. It was something else to devise methods of assessing motivation in people who cannot thus be manipulated.

One possible definition of motivation was interest. Presumably if a person were interested in an object or in a type of activity he would be motivated to do something about it, to take part in it. And so the attention of psychologists, educators, and personnel men was focused on interest.

Definitions and Measures of Interests. Various methods of assessing interest and interests were tried, with confusing results. Some researchers claimed that interests were unreliable and unstable in adolescence, unusable for predictive purposes (189). Others, like Strong (303) and Carter (56, 57, 58), found them reliable enough for practical use. These disagreements arose from failure to define interest, or to pay attention to the definitions used by others. Four types of interests, varying with the method of assessment, have since been defined (313:377ff.) and should be kept in mind in discussions of this topic.

Expressed interests are expressions or professions of specific interest; they are preferences. Thus a boy may say that he is interested in stamp collecting or in engineering.

Manifest interests are expressed not in words, but in action, through participation in activities. Thus a high school girl manifests an interest in music by joining the glee club, by singing in the church choir, or by collecting classical records.

Inventoried interests are estimates of interests based on responses to a large number of questions concerning likes and dislikes, or concerning the order or preference for groups of activities. These responses are then summarized by statistical methods which yield a score for each of a number of occupations or types of occupational activity. Widely used and rather well-studied inventories include the Strong Vocational Interest Blank and the Kuder Preference Record, but even these are different enough in principle and method so that it is necessary, when using one of them, to know whether or not certain relationships have been established for that particular instrument. What holds for one may not hold for the other.

Tested interests are manifest interests but interests manifested under controlled rather than in life situations. Thus a test of the relative amounts of information retained about several occupations after seeing a variety of occupational pictures, or a test of the relative amount of time spent examining each of several pamphlets on as many occupations, would be an interest test. Although some interesting research has been done with such methods, no such tests are currently available.

Early investigations of interests relied on expressions of interest; contemporary research, and that of the last quarter-century, has found it more worth while to focus on inventoried interests. Hence most of what we know about the role of interests in vocational adjustment comes from work with interest inventories.

TYPES OF INTERESTS

Interests have been classified in ways which at first glance seem to vary considerably (313:381), but which on closer examination are in considerable agreement. Such discrepancies as are found are traceable to the lack of a certain type of data in one analysis, so that a given type of interest had no opportunity to appear, or to one analysis having stopped with occupations while another has moved on to examine the factors which constitute interest in occupations. A classification of interests which results from a synthesis of available data follows.

Scientific Interest. Scientific interest involves a desire to understand the why and how of biological and physical processes, the desire to add to the store of such knowledge, and the desire to put such knowledge to use. Within this broad scientific category there are special emphases, categorizable along the dimensions of biological and physical subject matter, of theory and practice, of finding out and of putting to use. Physicians, psychologists, chemists, physicists, and engineers have a large "loading" of such interest.

Technical or Material Interest. Technical or material interest resembles

scientific interest in content, but stresses mastery and applications more than understanding or theory. While there is a *level* difference, which would not in itself justify considering this a different field, there is also a *field* or qualitative difference which is also important. Technical interest, unlike scientific, does not value knowledge for its own sake, but rather for what it will do. Hence the alternative title, material interest. Aircraft pilots, foresters, and farmers have this type of interest to a high degree.

Humanistic or Social Welfare Interest. Social welfare interest is an interest in people for their own sakes, whether close-up, as individuals who are seen and dealt with at close range, or by remote control, as groups of people who are seen only as groups or as abstractions. The focus here is on helping people because people are important in themselves, not for what they can do for oneself or for society. Human relations are important in close-up work, but the content or the goal is more important in remote-control interest. Occupations in which this type of interest is important include not only the obvious social welfare jobs of social worker and group worker, but such other occupations as teacher of social studies and educational administrator.

Systematic or Business Detail Interest. Business detail or systematic interest involves a liking for work which is neat and orderly, in which records are kept, the flow of work is recorded, controls are established and applied, system rules. The focus here is on method and on impersonal, methodological detail. Accountants, office clerks, and purchasing agents have this type of interest more than do people in other types of occupations, although in many clerical workers even this type of interest is not highly developed, clerical work being for many simply the pleasantest available semi-skilled means of earning a living.

Business Contact Interest. Business contact interest may be characterized as interested in dealing with people for the good they can do to oneself or to one's organization, rather than for their own good. Human relations are more satisfying than the content dealt with, as in close-up social welfare interests, but the goal of personal gain dominates. Occupations in which this type of interest is strong include sales work, sales management, and some related types of managerial and promotional work.

Literary Interest. Literary interest may be defined as an interest in the use of words for the expression of ideas or for the influence of others. The interest is therefore one in both content (ideas), and method (expression). Goals may vary considerably, depending upon other factors. Typical occupations include those of lawyer, author, and journalist.

Musical and Artistic Interests. Musical interest and artistic interest appear

as interests in media of expression. They are independent of each other as we now see them, which suggests that the medium is of fundamental importance. Perhaps this is because the differing underlying aptitudes are more important than the presumably similar personality factors which make self-expression important. That literary interest is also distinct, is self-expressive, and involves a medium which requires still another type of aptitude, lends further support to the notion that these are distinctive, aptitude-based, self-expressive, but medium-oriented fields. Many persons have these types of interests without seeking or finding vocational outlets for them. When musical and artistic interests exist in a high degree, along with the required special aptitudes, they find outlets in occupations such as those of musician and music teacher, artist and art teacher.

In time, more types of interest may be identified, for the list of interest factors has expanded with improved instruments and research methods, just as has the list of aptitude factors. But for the present the above list serves reasonably well.

ROLE OF INTEREST IN VOCATIONAL DEVELOPMENT

In considering the role of interest in vocational development it is necessary, for reasons which were mentioned earlier and which will become clearer below, to deal with one operational definition at a time. Since interest tests have not gotten beyond the laboratory stage only three approaches need to be considered: expressed interests, manifest interests, and inventoried interests. Only the last named requires detailed treatment, since expressed interests or preferences have been dealt with at the end of Chapter 6, and manifest interests have not been much studied.

Expressed Interests. Expressions of vocational preferences have been shown to be unreliable in childhood and early adolescence (188). They change rather systematically with age during these life stages, younger children tending to express interest in being firemen, cowboys, and other occupations which appeal to the needs of that age, and early adolescents more commonly indicating preferences for occupations such as those of professional athlete, aircraft pilot, and forest ranger. Beginning with middle adolescence preferences become more stable, but their relationship to other factors remains low. They have only a moderately high relationship to inventoried interests, and in the cases of most types of high school and college students—the sons of members of the upper classes are the only known exception—have a lower relationship to the occupation eventually entered than do inventoried interests (202; 288; 304:393–403; 358).

On the other hand, when preferences *are* consistent over a period of years, as they are in some children and adolescents, they have been shown to have a bearing on the occupation entered and on stability in that occupation (93, 280, 358).

Manifest Interests. Interests as judged by the activities a boy or girl engages in tend to change with age, even though some hobbies are enduring. Many boys who build model planes or collect stamps at age 14 give no time to these hobbies at age 17; scouting is typically an activity of pubescent boys most of whom drop out soon after the attainment of puberty; and there is a high rate of turnover in the high school clubs which allow for the expression of interest in such activities as music, drama, journalism, science, and languages. One study of participation in extracurricular activities followed high school students on into college and found that certain types of activities which had recruited from the brighter students in high school no longer held them in college, but instead drew from the less able members of the group at that stage (292). Apparently participation in school and college activities, and in hobbies, is more a function of needs which manifest themselves differently at different ages than it is of enduring interests. For example, a camera club may provide a means of being with friends rather than an outlet for artistic or scientific interests, and this need for affiliation or belonging may find a better outlet later in a social club or in a dramatic group. The manifest interests of adolescents seem to have little relationship with inventoried interests, occupational preferences, or occupation entered.

Despite these facts, it is true that long-enduring manifest interest sometimes exists, as in the boy who keeps up his model railroading hobby throughout the high school years, the girl who studies the habits of local birds throughout adolescence, and the man whose boyhood interest in mediaeval life developed into a broader interest in cultural anthropology in adulthood. Thus it has been established that long-lasting hobbies are related to inventoried interests (308) and to occupation entered (93). The relationships are even clearer when not specific hobbies or activities, but types of activities engaged in, are considered. The case of Marjorie Miller, described at the end of Chapter 6, is a good illustration.

Inventoried Interests. Inventoried interests, we have seen, are only moderately related to preferences. Since preferences change somewhat and inventoried interests are relatively stable, this is understandable.

Choice or entry, on the other hand, is related to inventoried interest. Occupationally mobile men and women, for instance, those who find a way to finance a higher education, tend to enter training programs which are in keeping with their inventoried interests, tend to complete training if their

interests are appropriate and to drop out of training if not, tend to enter occupations of a similar nature and if they enter occupations which are not in line with their inventoried interests, tend to shift to others which are (304).

Success in establishment may be somewhat related to interests, since, as was just mentioned in connection with entry, men and women tend to enter occupations which are appropriate to their interests, and tend to leave inappropriate occupations if they do enter such. This is a matter of placement in an occupational field, and may be more a matter of satisfaction than of success. Since interests have also been found to characterize various occupational levels (18, 303, 304), it is also true that people with a given kind of interest will find certain occupational levels more congenial than others.

Success in an occupation is related to interest in some fields but not in others. When the work is such that congeniality or its lack can seriously affect devotion to duty, interest seems to be related to success. Thus the amount of life insurance sold per year is significantly related to business contact interest on Strong's Vocational Interest Blank, presumably because if this type of selling and cultivation work is not congenial it is easy to find excuses for, and ways of, spending time in more agreeable ways. On the other hand, there is no relationship between interest and success in wartime military flying. Apparently many people who do not have technical material interests are able to apply themselves sufficiently well, if they have the ability and extraneous motivation, to make good in this field. This appears to apply to most occupations, particularly to the less demanding, routine occupations such as office work.

Advancement in an occupatiaon might be expected to be partly a function of interest since interest could, as in the case of selling insurance, affect degree of application. But it is also possible that extrinsic motivation would be so important as to outweigh lack of interest. For example, the desire for the prestige or pay and living standard that come with promotion may result in as much application as, if not more than, interest in the activity itself. Unfortunately, objective evidence bearing on this point is not available.

Satisfaction in work is what might most logically be expected to be the outcome of having appropriate interests. Other factors, such as ability to earn a living, would also be likely to affect satisfaction, but liking for the work activities would also seem to be a major contributing factor. Satisfaction can be ascertained by asking people how well satisfied they are, but for their responses to be meaningful they must be able to differentiate between

satisfaction derived from their work activity, from their work situations, from the status bestowed upon them by their work, and from the various other areas of living which are associated with their work. This is not always possible. However, Schwebel's study on the interests of pharmacists (281), and McCormack's (204) analysis of role conflict, identification, and self-concept in pharmacists, suggest that unless interests are appropriate to work, situation, and role, dissatisfaction results.

Occupational stability, discussed in connection with entry and success in establishment, suggests another method of finding out whether or not people like their work; one may ascertain whether they keep at it over a period of time or change to something else. Here again the measure is contaminated by other factors, for earnings, health, associates, and other extraneous matters may affect staying in or leaving an occupation just as they affect expressions of satisfaction or dissatisfaction.

In practice, however, studies of the relationship between interest and job satisfaction have used a stability criterion. They have shown, as we saw earlier, that people who are somewhat mobile tend to enter, sooner or later, occupations which are in line with their inventoried interests, and to leave occupations which are inappropriate. It is also established that men who remain in occupations which are not appropriate to their interests frequently develop avocations which provide outlets for their interests (308). Thus accountants with inventoried interests like those of engineers often have technical hobbies such as model railroading.

Conclusions Concerning Interests. Vocational interests, we have seen, are best defined in terms of the methods used to assess them. Of these methods, interest inventories which yield scores for a variety of interests have so far proved best. Inventoried interests are related to vocational development, for there is a strong tendency for people to enter and to remain in fields of work which provide outlets for their interests, and to leave inappropriate fields for more appropriate ones. Interest is related to success in occupations only under special conditions, when the congeniality of the activity is crucial to application; when, as in most occupations, motivation from other sources such as status or income needs can suffice, interest in the activity itself is not related to success. Vocational interest is important largely in determining direction and persistence of effort but not, apparently, the amount of effort.

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PERSONALITY AND VOCATIONAL DEVELOPMENT

WHAT IS PERSONALITY?

Personality has been defined in a variety of ways, some focusing on superficial characteristics, others attempting to get at more fundamental levels. Some definitions look at personality in terms of its impact on other persons, whereas still others view it from the standpoint of the individual in question. Some definitions treat personality as the sum total of a number of relatively unitary characteristics, whereas others make it a total entity which cannot be viewed atomistically. For our purposes a pragmatic approach seems appropriate. Accepting whatever definitions have been used in studies of the role of personality in vocational adjustment, we shall be concerned with what they have found out.

Trait Psychology. In practice, most studies of personality and occupations have either explicitly stated or implicitly assumed that personality is made up of a constellation of traits, more or less integrated into a functioning unit (284:317–359). Traits are defined as patterns of reactions to stimuli. Thus a person tends to take the lead in social situations, or conversely, tends to let others take the lead; this reaction pattern leads to the statement that he is socially dominant or submissive, and the inference is that there is a trait of dominance-submission. In an integrated personality these behavior tendencies are fairly well defined, a condition which clarifies social roles, simplifies decision making, and hence minimizes conflict and anxiety. When the various traits of a given personality are harmonious and do not conflict with each other, as when an individual is self-confident, extroverted, and dominant, then behavior is further simplified and roles are even clearer. There is less opportunity for internal conflict, and a high degee of integration is attained.

The Social-role Approach. If personality is viewed as the patterning of behavior in various types of situations, then one approach to personality is to study the impact of the individual on others, through sociometry and rating (193, 278). The role that his peers see him taking or playing, the ways in which he tends to relate to his peers, their perceptions of his behavior tend-

encies, supply the basis for developing a description of the individual's personality traits.

The Phenomenological Approach. In the phenomenological approach to personality (294), the way in which the individual perceives his environment and himself is the focus of interest. His structuring of the environment may be viewed as a projection of himself upon it. Here the emphasis is not on behavior as in personalistic or sociometric trait psychology, but on the individual's perceptions and concepts. In a sense this is his impact on the environment, but only in the sense of the use to which he puts it, the things which he thinks he sees in it, not in the sense of the impressions people in it form of him. In the projective approach, the questions are: Does the individual perceive his environment as friendly or threatening? Does he move toward it or does he withdraw from it? Does he expect success in it or is failure the anticipated outcome? And what sort of role does he assign himself in it? Given a relatively free or unstructured situation, the individual organizes it according to his own needs, and thus reveals his traits.

The projective approach has stressed the total personality but like other approaches finds in practice that it must deal with behavior tendencies, that is, with traits, in order to avoid vagueness. The principal difference between this and some trait approaches is that the projective approach begins with a relatively unstructured situation (a whole), with which the individual can do as he likes, which means that he projects his own specific behaviors into it for later summation, whereas more traditional methods begin with specific behaviors which are then summed up in order to ascertain the trends or traits.

The phenomenological approach also includes, as indicated above, a focus on the self. This approach to personality has won considerable popularity, examining personality through self-perception as revealed by the self-concept (294). The dimensions used by trait psychology may be used in describing the self-concept, with the result that the phenomenological approach is also in a sense a trait psychology even though it tends to stress the self more than the traits which make it up. The phenomenologist's use of self-descriptive instruments, first developed by behavioristic trait psychologists, illustrates this common ground. As in the case of all global approaches, the self cannot be described *in toto,* but only in terms of various characteristics and of their integration. Characteristics are traits by any name. The peculiar value of the phenomenological, self-concept and projective, approach to personality is its emphasis on the individual as the organizer and synthesizer of what he perceives. It puts the person back in the center of the picture, while losing sight

neither of the behavior by means of which he interacts with others nor of the use he makes of his environment.

Assessing Personality. As the above approaches imply, personality can be assessed in terms of its impact on others, in terms of the individual's structuring of his environment, or in terms of the individual's perception of himself. Thus we have rating scales and sociometry, projective techniques, and personality inventories and interviews.

Rating scales and sociometry, we have seen, provide opportunity for persons in the environment of the individual to record the impact he has on them. Rating scales are typically made up especially for use in a particular situation, and provide for ratings of behavior which are deemed to be particularly important in that situation. Thus a rating scale for use with student-teachers may include a trait called "interest in children" or, more operationally, "relationships with children," and another trait called "presentation of subject matter." Each of these traits or aspects of behavior is broken down into steps or degrees, so that the rater may check the degree to which the person being rated manifests that type of behavior. Thus, for "relationships with children," the steps may range from "children tend to gather around her and seek her company," through "children accept her when present but do not gravitate toward her," to "children avoid her company when possible."

Sociometric techniques, while essentially ratings, differ in method of recording behavior and attitudes. The Guess Who Test is one such method. In it classmates, fraternity brothers, aircrew members, or the employees in one department are asked to read brief sketches of hypothetical persons and to write in the names of members of their group who best fit the description. The descriptions focus on types of behavior which are relevant to the purposes of the group. For example, members of bomber crews going through survival training may be asked to name fellow crew members who "always seem to know what to do in a crisis," "manage to keep up their spirits even when the going is rough," "make sure of their own comfort without thinking about that of others," etc.

Another common sociometric technique calls for the selection of persons with whom the rater would choose to engage in various activities. He may be asked to choose a partner for a camping trip, a foreman for his shop, or commanding officer for his flight when in combat. These "peer nominations" or "buddy ratings" are summed up, to find out which persons are most frequently assigned to each type of role, or to which roles a person is most frequently assigned, depending upon whether interest is in filling jobs or in

studying people. The kinds and frequencies of role assignments provide a basis for describing the impact of a person on his peers.

Projective techniques, it has been pointed out, allow the individual to structure his environment in his own way, thus revealing both his personal needs and the external pressures which he feels. The most commonly used projective techniques are the Rorschach Inkblots, the Murray Thematic Apperception Test, and the Rotter Incomplete Sentences Test. In each of these techniques an only partially structured situation or incomplete material is presented to the examinee, who then finishes structuring or completes it in his own way. In the case of the Rorschach he looks at inkblots and tells what they remind him of, what he sees in their shapes and color. In the Thematic Apperception Test (TAT) he makes up stories about pictures, selected for this purpose because expressions and other details are ambiguous enough so that different people interpret them differently. In the Incomplete Sentences Test (IST) the examinee finishes each of forty sentences of which he is given only the beginnings, for instance, "I wish . . .," "Most people . . .," and "The future . . ."

The responses to the series of inkblots, pictures, or incomplete sentences are analyzed in ways of varying complexity, some of them objective and standardized and some subjective and unstandardized, in order to ascertain response tendencies which are interpreted as evidence of personality characteristics. For example, responses to the Rorschach may show a tendency to respond largely to the form, rather than to the color or texture, of the blots, generally taken as evidence of a controlled or even inhibited personality; analysis of TAT stories may reveal recurring themes of conflict with older males, suggesting poor father-son and general authority relationships; and the IST completions may indicate insecurity in facing the new tasks and adjustments which are involved in adolescence.

Personality inventories and interviews have been mentioned as techniques which permit self-description, which reveal behavior tendencies as seen by the individual himself. Among the most widely used inventories today are the Guilford-Zimmerman Temperament Survey, the Minnesota Multiphasic Personality Inventory, and the California Psychological Inventory. In some disrepute for a number of years among psychologists because of their apparent lack of validity, personality inventories are now viewed somewhat more favorably thanks to technical improvements in their construction and better knowledge of when and how to use them. They seem to make particularly good sense when viewed as self-descriptions, when used to get an understanding of the individual's picture of himself, recognizing that his self-concept may not be closely related to the picture that others have of him

nor even to his objectively recorded behavior. The inventory gets at this self-concept by asking the examinee to check a long list of descriptive statements, according to whether or not they describe his behavior. The statements include items such as "People frequently ask my advice," "I blush easily," and "I would rather be with a group of people than by myself." Answers to these statements are summarized to obtain a score which indicates that the examinee does, or does not, tend to see himself in certain ways, for example, as sociable, dominant in face to face situations, or shy.

Interviews were once generally thought of as not lending themselves to quantification, as the antithesis of measurement. But during the past decade or two methods of conducting and analyzing interviews have been studied and improved to a point which makes it possible now to include interviewing among the list of scientific methods of assessing personality. The method is time consuming and expensive. It is still so subjective that it frequently yields invalid results, but it can be used objectively. *The method of interviewing* may be standardized. Thus in the semi-structured technique use is made of broad topic-setting questions to get the interviewee to discuss issues in his own way, and then of follow-up, more specific questions designed to get him to focus on aspects of the topic which he has not already covered. In the *structured* interview there is even more standardization of technique, a planned sequence of more specific questions being asked by the interviewer. *The method of analyzing the interview* may be standardized, and it is here that the technique of content analysis (31) has recently done a great deal to make the interview a more scientific method of personality assessment, for it has been found that interviewee statements may be excerpted, categorized, and classified so as to reveal behavior tendencies, needs, fears, values, aspirations, and other personality data in ways which are quite reliable. These are, of course, the individual's perceptions of himself when treated at the descriptive level; they may also be interpreted at deeper levels, by using the thematic analysis technique of projective methods.

Types of Traits. The names assigned to behavior tendencies and personality traits vary considerably from one instrument to another, in ways which are often confusing to the new student of personality assessment. It may be helpful to view them as part of a systematic classification scheme, for they tend to be derived from 1) normal behavior tendencies, 2) psychopathological tendencies, 3) needs or drives inferred from behavior, or 4) integration as judged by the harmony or conflict of behavior tendencies and needs.

Normal behavior tendencies measured by personality inventories, sociometrics, and projective techniques include such traits as ascendance, so-

ciability, emotional stability, restraint, and thoughtfulness. These traits, assessed by instruments such as the Guilford-Zimmerman, are all manifested by all persons in varying degrees, and they are generally thought of as desirable traits when possessed in moderation. Even when present in a high degree, they are not likely to be viewed with alarm. Their relevance to everyday school, work, and social situations is readily apparent to laymen, even though the expected relationships are not always found.

Psychopathological tendencies studied originally in clinical work have led to the use of trait names in some inventories which are less acceptable to laymen than are the trait names of normal behavior. They are less familiar, less clearly relevant to educational, employment, and social situations, hence less meaningful to nonclinicians.The Minnesota Multiphasic Personality Inventory (MMPI), for example, measures traits such as schizophrenia, hypochondriasis, and depression. Since these are generally thought of as mental hospital or clinic labels they connote a degree of aberration which makes them seem inappropriate for use with normal people. When it is remembered, however, that abnormality is considered by many to be simply the extreme of the continuum of human behavior, and when the syndrome of behaviors which is summed up by the clinical label is kept in mind, these traits do have meaning for description of normal people. Thus a high schizophrenia score on the MMPI may be taken as an indication of a tendency to view things differently from other people, to be in relatively poor contact with their thinking and feelings, and to view the world in terms of one's own needs rather than as others view it. Such behavior is certainly seen in many "normal," functioning individuals who might well be helped to be happier and more effective if these tendencies could be modified.

Other traits measured by the MMPI include hypochondriasis (tendency to worry unduly over health, emotional immaturity), depression (feeling of uselessness and pessimism), hysteria (immaturity and tendency to avoid problems by developing physical incapacities), psychopathic deviation (absence of deep emotional response, inability to profit from experience and disregard of mores), masculinity-femininity (interest in things typically liked by men or women); paranoia (tendency toward suspiciousness, oversensitivity, and ideas of persecution), psychasthenia (tendency toward compulsive behavior, ineffectiveness, vacillation, useless or obsessive thinking), hypomania (overproductivity of thought and action, tendency to undertake too many things, to be overconfident and enthusiastic), and social introversion (tendency to withdraw from contact with others). It can readily be seen from the characterizations in parentheses after the trait names that the

psychiatric labels refer to behavior tendencies which are meaningful for normal persons and which may have vocational significance.

Needs or drives have been variously classified, but one of the most widely used classifications is that developed by Murray (226) and used with the TAT. The list includes 29 needs, and hence is too long to be discussed in its entirety here. A few selected needs will illustrate. Aggression is the need to attack others, affiliation the need to associate with others, cognizance the need to understand, achievement to do things, dominance to rule others in face to face contacts, abasement to submit to others, and autonomy the need to do things one's own way. These needs resemble the normal behavior tendencies already briefly discussed; they differ from the traits discussed above largely in that they attempt to describe more deep-seated tendencies, inferring them from behavior rather than taking behavior at face value. They seek to describe underlying drives, rather than to classify observed tendencies. The language used may obviously be the same.

Integration requires a somewhat different language because it seeks to describe not one trait or a constellation of unitary traits, but the nature of the constellation itself. There is just one dimension, that of integration, of the degree to which the various personality traits fit into a harmonious whole or clash with each other and keep the individual in a state of conflict. The profiles of personality inventories or other self-descriptive techniques, and the personality sketches written on the basis of projective data, are often used as a means of showing how well integrated the behavior tendencies and needs of a person are. It is particularly the phenomenological and projective approaches which stress understanding the total personality.

PERSONALITY AND VOCATIONAL DEVELOPMENT

In considering the role of personality in vocational development, it is again necessary to keep in mind the nature of this development. At times the focus must be on vocational preferences, when these represent the degree of proximity of the individual to work; later it must be on entry, whether at the training or at the job level, stages at which the individual has in varying degrees made an actual choice by committing himself to the occupation; and still later the focus must be on success and satisfaction in the work itself. It could shift again to retirement, as the individual leaves his occupation, although this has until recently been a neglected topic.

Preferences. Theoretically, one might expect to find certain kinds of relationships between personality and vocational preferences. According to

the self-concept theory, the occupation preferred should be one in which the individual expects to be able to be the kind of person he perceives himself as being, to assume a role which is congenial and compatible with the self-concept. If a given occupation were seen by all people as involving taking a certain kind of role, it seems likely that personality and preference would be generally related, but if people see different roles in a given occupation it is likely that other individual relationships, not group relationships, will be found. Since Raylesberg (254) has found that engineering is seen by some students as a scientific, by others as a materialistic, and by still others as a social welfare occupation, in which they anticipate playing some one of these roles in keeping with their own dominant values, it must be concluded that the latter hypothesis is valid. It seems likely that, in adolescence at least, the individual's needs and values cause him to have a distorted conception of what occupations have to offer. Vocational preferences appear to be related to the role that the individual believes he would play in an occupation, but the type of occupation preferred may not be related to the type of role sought, because any one occupation is perceived as involving too many different kinds of roles.

Entry. When entry into training or getting a job is the criterion of choice, theoretical expectations would be the same as when choice is defined in terms of preference. But, since the choosing individual is closer to the realities of the world of work, it might be anticipated that he would be more likely to perceive the occupation of his choice in the same way as others perceive it. What we know about perception and projection suggests, however, that there should still be room for considerable variation in occupational perceptions, and this is confirmed by Raylesberg's above-mentioned research with engineering students. Furthermore, what we know about occupations makes it clear that, despite the prevalence of reasonably valid stereotypes concerning some occupations, there is room for a considerable variety of roles within any one occupation. A lawyer, for example, may be a courtroom dramatist, a scholarly research worker, a personal counselor, or a shrewd bargainer in wage negotiations. The individual entering the occupation of lawyer has therefore considerable choice of roles with the occupation. The important question at this point is, then, that of how many occupations and occupational specialties are so highly structured that the individual must adapt to them or leave them, and how many are so unstructured that the individual is free to shape that which he enters to his own personality. Unfortunately, research has not progressed to a point which makes possible an answer to this question, but beginnings have been made in the study of role expectations (51, 73, 119, 204, 338). Hall (135) identified three types of medical occupa-

tional roles: those of *colleague, individualist,* and *altruist,* the last two existing despite considerable pressure from the highly organized profession in support of the first, or colleague, role.

Raylesberg's data, referred to above, suggest that at least at the college level any occupation which has in it a variety of specialties is perceived in varying ways by those who are preparing for it, and that these differences are related to personality characteristics. Whether or not these differing perceptions lead to differing specialties has not been ascertained. While the studies of role conflict, discussed in Chapters 2 and 8, emphasized conflicting *role expectations* as sources of pressure and conflict, psychological data on needs and on identification, combined with phenomenological findings like Raylesberg's, lead one to conclude that *occupational role expectations* and *individual needs* may not infrequently be another source of conflict, with discomfort for the individual.

The personality in the form of needs is related to occupational choice when the occupation is defined with sufficient precision, as suggested by the work of Small, Sweat, and Von Arnold (290), who studied the personality characteristics of advertising art, retail merchandising, dental hygiene, and mechanical technology students in a two-year technical institute. The word "suggested" is used advisedly, for the study has certain methodological defects which make its conclusion tentative at best. 1) No specific hypotheses were tested and no cross-validation was carried out to make sure that seemingly significant findings were not merely the result of chance. 2) Data may have been contaminated by the judges knowing the status of the case and his occupation, as well as by using the same data as the bases of two different classifications or ratings which were subsequently correlated with each other to test hypotheses. 3) Probability levels as high as .20 were accepted when greater certainty was lacking. 4) Finally, "clinical" methods of analyzing data were used, sometimes with, but sometimes without, quantitative analysis as an aid to subjective examination of the data. Despite these possible defects, which may or may not invalidate it, the study is unique enough to warrant attention.

Assuming until further evidence is produced that the findings of the Small, Sweat, and Von Arnold study are valid, it is interesting to note their personality portraits of the occupational groups studied. *Art students* are characterized as withdrawn, narcissistic, emotionally flat, with a marked element of bizarrity and anal traits. They appear to be men and women who made poor contact with the world around them, react differently to situations, require little association with others, do not seek affection or sympathy, get little satisfaction from mastery or status, seek outlets for

regressive tendencies in the culturally acceptable media of art. For them, "The drawing board is an island, removed from human contact," which permits them to retreat into fantasy while maintaining contact with reality.

Retailing students did not reveal group characteristics which permit as clear a portrait as seemed possible for art students. But anxiety was noted in this group more often than in other groups, together with a more pronounced emphasis on money, status, and power. The needs to attack, dominate, and emulate were significantly high in the men, who were on the whole an aggressive, masculine, group. In the women, on the other hand, there were signs of conflict at the freshman level, whereas by the end of the training period these women students seem to have become more integrated in a masculine pattern, finding an outlet for a poor adjustment in the competitive masculine occupation of their choice.

Dental hygiene students, like art students, showed a clear personality pattern. They were characterized by strong needs to sympathize, help, and protect, to establish close personal relations with others, and to restrain impulses. They seemed to find in their work as dental hygienists an opportunity to play a supportive and motherly role which they seemed likely to continue to play later in marriage.

Mechanics students were found to be characterized by strong needs for achievement, for taking care of and saving things, for recognition, for affiliation, and for restraint. The authors suggest that their need to take care of things is a successful way of dealing with aggressive impulses. Like the dental hygienists, these men appear to have chosen an occupation which provides a satisfactory outlet for their controlled, aggressive needs, one which is appropriate also for the sex-related roles they wish to play.

Not all studies of student groups have been as successful as that of Small, Sweat, and Von Arnold seems to have been. A careful study by Kaback (172), for example, reported different results from Rorschach tests of student and employed accountants, and also for student and working pharmacists, and so much overlapping of the two occupational groups that generalizations seemed unwarranted. More carefully designed studies using searching instruments for the assessment of personality in student occupational groups are needed.

Placement and Occupational Differentiation. Studies of differences between employed and unemployed workers, made in Minneapolis and elsewhere (206, 223, 243) during the depression of the 1930's showed that the employed tend to be somewhat more dominant, more self-sufficient, and more stable than the unemployed. Those with the more socially desirable characteristics and who are most effective in managing themselves and their

relations with others are apparently preferred as employees to those who are not easy to deal with and who are less effective in interpersonal relationships.

Differences between occupational groups have generally been found to be negligible, such personality differences as have been found tending not to be sufficiently clear-cut or well established to be helpful in vocational counseling or personnel selection (313: Ch. 19). They do, however, suggest personality sketches like those drawn up to describe students by Small and associates, which may be of some value if it is remembered that there is great room for variations. Understanding the typical personality pattern may at least provide orientation to the group of colleagues a person will find in that occupation, may help him judge whether he will find the work and associations congenial.

Salesmen have been found to be more dominant than office workers, although they are not, as generally supposed, more extroverted or sociable (85). Apparently those who can dominate in face to face situations fit into sales work, even if they do not particularly enjoy being with people or seeking satisfactions in the world around them. Perhaps this is because they can master the techniques and do the work, even though some aspects of the activities do not particularly appeal to them.

Insurance salesmen have been found (192) to have a tendency to feel overconfident or depressed, to avoid problems by developing physical symptoms, to be insensitive to the feelings and opinions of others, and to be suspicious and inclined to feel persecuted.

Women factory workers during World War II were found, in one study (344), to be more active and optimistic, more compulsive and given to unreasonable fears, more suspicious, and less affected by how others feel and think than are most women.

Artists have been found to have a high degree of intellectual ability, to be outgoing in seeking emotional satisfaction, and to be more anxious than most people, but not sufficiently different from the general population for it to be possible to describe an "artistic personality" (262).

Vertebrate paleontologists, of whom there are only about 75 in the United States, did, in a similar study (263), reveal a group personality. They tended to be low in creative imagination, liking to work with concrete facts, and showing lack of ability in interpersonal relationships, as though their scientific work were an escape from people and from intangibles.

Biologists (265) and physicists (264) have been found to have no clear-cut personality pattern, but something approaching one. They tend to see things as wholes, to generalize, and yet also to see details; they tend to be

objective in their thinking; their interpersonal relationships tend to be smooth but not warm; they have a substantial degree of general anxiety; they tend to be unaggressive but stubborn, not dominant but not submissive. They tend to accept things as they are, but are intensely interested in knowing how and why they got that way. Like the artists she studied, Roe found these two types of scientists not high in masculinity, but better adjusted to life than the artists, partly, she believed, because they had more rational control and lived in a more stable and supportive social climate. The social life and work activities of the campus and research institute appear to stabilize marriage and life in general more than do those of the studio.

Psychologists showed more concern with interpersonal relationships than did other scientists in Roe's studies (266), including closer ties with parents and more conflict connected with these bonds. They were more dependent themselves and more supportive of others. Psychologists appear to be able to exercise the rational controls common in the other scientists, but less inclined to do so in their daily living. Clinical psychologists are more concerned with persons than are other specialists in psychology, but the interspecialty differences are slight. Anthropologists were found to be very much like psychologists in their personality pattern, but more extreme in their differences from the other scientific groups. They are more hostile toward authority, more concerned with interpersonal relationships, but apparently less concerned with helping people than are psychologists.

Success. If success is defined as the *level* attained on the occupational ladder, then it is only in recent years that there is any indication from research that personality is related to success. Few studies had attempted to ascertain personality differences associated with occupational levels, and when the attempt was made (243) the results were negative. As better methods have been tried, relationships between personality and occupational level have been found, in line with the substantial evidence that there are interest and value differences between occupational levels. Since value and interest differences exist, it seems logical to expect to find personality differences. The room for personality variations at each occupational level may be great enough to obscure the relationships between personality and success, but they have begun to emerge.

It has frequently been suggested (295) that vertical mobility is a product of emotional drives which were not satisfied by early primary group relationships such as those of parent and child, and, furthermore, that this very drive to mobility produces further deterioration in interpersonal relations and in emotional adjustment. Ellis tested this theory in an interview study of 60 outstanding career women in Montgomery (100), about equally

divided between mobile and nonmobile in their occupational histories. Data on childhood and adolescent attachment to parents, humiliating experiences, number of friends at the time of the study, conflict with parents, health, and childhood happiness were analyzed, yielding significant differences between mobile and nonmobile women and sustaining the hypothesis. In another group, however, Wispé (362) found evidence that insurance salesmen seem able to sacrifice quality of peer-group relationships in order to achieve business success, without evidence of conflict resulting from the clash of competitive and sympathetic values. This may, of course, have been because this group was actually selected by experience and included few or no men with neurotic personalities and poor childhood adjustments, although another study by the same author (363) makes this seem unlikely.

A logical analysis of other studies on social mobility and interpersonal relationships by Blau (36) supports Ellis' conclusions: mobile individuals are not so well integrated socially as nonmobiles; their occupational and social roles are not compatible; they are therefore behavior deviates and suffer from feelings of insecurity. Stasko, discussed in Chapter 9, well illustrates Blau's conclusions. Levin (191) has called this syndrome status anxiety. Similarly, Dynes and others (94) found that interpersonal relationships in the family were negatively related to aspiration level in college students.

If success is defined as *success on the job,* again there were no convincing data until recently. A few studies did show that salesmen who sell more tend to be more dominant on personality inventories than are those who sell less (243), but objective data went no further. Heron's studies of factory workers and bus drivers (147, 149) also yielded negative results. Most studies using projective and interview methods have not compared successes with failures; among the few which did so were a series of Air Force studies which found no differences (131). An interview study by Wispé and Lloyd (363) showed that personal insecurity was negatively related to production, a relationship different from that just discussed between security and mobility. Many interesting hypotheses have been set up, such as the theory that men who tell TAT stories involving striving and optimism make good executives, but these are still largely in the hypothetical stage, even though heavily relied upon by some executive selection and development consultants. Some interesting ideas as to the relationships between personality structure and "vocational patterns" or performance on the job have been developed by Gellman (117) as a result of experience in a community counseling service. He has hypothesized that personality expresses itself in work through the meaning of work to the inidividual, his motivation to work, his mobilization of energy in work, his capacity to adjust to the interpersonal relationships of work, his

positive and negative work identifications, and his ability to adjust to work pressures. In due course hypotheses such as these may be tested with appropriate subjects and data, leading to more adequate theoretical formulations than we now have and thus to more definitive findings as to the relationships between personality and success on the job. It is interesting that although it has for years been reported that personality factors are the greatest single cause of dismissal in industry—which might be expected since employers know better how to screen applicants for aptitude and proficiency—little is now known about just which personality traits make for success or failure in a given occupation.

Another definition of success is that of *advancement in the occupation,* as indicated by promotion or some other form of recognition of achievement. Again there is a lack of data upon which to base conclusions, although there has been much speculation based on unsystematic observation. The studies of natural and social scientists conducted by Roe and referred to earlier are something of an exception, for she not only obtained interview and projective data from eminent biologists, physicists, psychologists, and anthropologists, but compared these men with less eminent members of the same professions. The Rorschach records of the eminent social scientists reveal them as less well adjusted, more original and less controlled, and more concerned with interpersonal relations, than were the less eminent social scientists. Among the biologists the differences between the eminent and the less eminent were not like these: the more eminent were better controlled. There were no differencs among more and less eminent physicists. Since her groups were small and there was no attempt at cross-validation, any conclusions must be highly tentative, but it seems legitimate to conclude that the personality factors which differentiate very successful from less successful men in one occupation are not necessarily important to success in another occupation, and that the personality factors which we are now able to identify may have no bearing on advancement in still other occupations.

Studies of achievement motivation as revealed by analysis of the Thematic Apperception Test (89, 203, 274) have reported significant relationships between this type of need and grades. They have also shown that achievement motivation is high in the middle class (for which self-improvement is possible and even likely), less for upper class persons (for whom improvement of status is unlikely since they are already at the top of the ladder), and lowest for lower class persons (who have learned not to court disappointment by striving for remote and intangible rewards). These findings fit those reported by Ivy League colleges (81), concerning the superior academic achievement of public school (middle class) as contrasted with private

school (upper class) students, Ginzberg's observation (124) that middle class college graduates apply themselves more completely to their careers than do graduates from upper class homes, and McArthur's finding (201) that middle class students stress *doing* while upper class students put more emphasis on *being*.

Childhood experiences generally considered to be indicative of personality characteristics such as achievement motivation, independence and neuroticism have been assessed in a series of studies conducted by Torrance, Levy, and Super at the Advanced Survival School of the U.S. Air Force. When indices of these inferred personality traits have been correlated with success in survival training and in aerial combat the expected relationships have been found: the best survivors and the aces tend to be the better motivated, the more independent, and the more stable men.

Satisfaction. Personality traits might, like interests, be expected to have a clear relationship to satisfaction in an occupation even if not to success. One of the first studies of job satisfaction (104) dealt with neuroticism, finding the two to be negatively related, and it is widely held that much worker dissatisfaction is the result of personality factors. The conclusion is often based, as in the study cited, on inadequate samples. But singularly little research has been carried out to substantiate or disprove what many have been led to believe by observation and clinical experience. Heron has reported a low but positive correlation between emotional stability and job satisfaction in British bus drivers and semi-skilled factory workers (147, 149). In one study (283), it was found that well-adjusted teachers tended to remain in teaching, while those who were badly adjusted and bright tended to leave. This suggests that those whose personality characteristics make an occupation unsatisfactory for them and who are bright enough to realize this and to act on knowledge, tend to leave their occupations for something which they hope will be more suitable. But it does not indicate that personality characteristics make for satisfaction in teaching.

Roe's studies also suggest some relationships, although not in quantitative form. She wrote:

> The one statement that can be made about all in the group of eminent biologists, without exception, is that they have worked at their jobs with persistent intensity, with single-minded devotion—and with great personal satisfaction. They have worked day and night, workdays and holidays; generally only reluctantly and usually chiefly because of outside pressure have they spent any noticeable amount of time on anything else. Most of them are happiest when they are working. Such concentration usually appears as soon as the research concept is fully understood by them. And the concentration is on work primarily as an end in itself, not for

economic or social ends, or even for professional recognition, although they are not indifferent to these (265:65).

A different approach to personality and job satisfaction is found in psychoanalytic and phenomenological theories. They suggest that vocational satisfaction occurs when the dominant needs find outlets, when the individual can play the desired role, in work. Typically, in the past, the expectation has been that a given need or role would find an outlet in a given type of work. Thus salesmen could be viewed as men who need to dominate, and surgeons as men who need to attack, others. As we have seen, this kind of hypothesis has not usually been validated when checked. But another kind of hypothesis can be derived from these positions. That is, that if the individual perceives his occupation as one which meets his dominant needs he will be better satisfied with it than he would if he perceived it as not permitting self-realization. No general trait-job relationships are hypothesized; instead, compatibility of the self and environment or of self and role expectations are considered central. This approach has been well used by White in his studies of *Lives in Progress* (356: Ch. 4).

The hypothesis that over-all job satisfaction will vary with the extent to which needs can be satisfied and are actually satisfied in a job was thus set up by Schaffer (279). Three questionnaires were used, one to measure the strengths of twelve different needs, a second to measure the extent to which the job permitted satisfying each need, a third measuring general job satisfaction. A multiple correlation of .58 was obtained between the satisfaction of each person's two strongest needs and job satisfaction. In other words, job satisfaction does tend to vary with the extent to which felt needs are met in the job. This seems to support the notion that jobs serve to implement self-concepts, and that when the self-concept and the job role do not match, dissatisfaction results.

CONCLUSION

In closing this discussion of the relationship between personality and vocational development, it is important to point out that any conclusions reached on this subject at present are highly tentative. Theory, instruments, and research design are developing so rapidly in this area that new and important hypotheses and conclusions are likely to appear before this ink is dry. Despite, and indeed because of, the turbulent state of personality research it seems necessary, however, to draw whatever conclusions seem most warranted at present.

1. Personality traits seem to have no clear-cut and practical significant

differential relationship to vocational preference, entry, success, or satisfaction.

2. It seems possible that, if occupations are sufficiently narrowly and precisely defined, for example in terms of functional specialties within an occupation, significant personality differences in occupational groups may be found. Perhaps some will be found which are so highly structured that only individuals with certain traits are successful or satisfied in them, whereas others will be found in which there is so little structure that individuals with greatly varying personality patterns can find satisfaction in them, each structuring the occupation in his own way. There is some indication that this may be the case.

3. In certain occupations, although apparently not in others, it is possible to construct a picture of the typical personality. These personality sketches are not sufficiently clear-cut to provide a scientific basis for occupational choice, but the role expectations of occupations appear to be such as to affect the ease with which an individual achieves self-realization in an occupation.

4. Poor interpersonal relationships in childhood appear to be related to vertical occupational mobility, this mobility being achieved at the cost of present relationships.

5. Motivation to achieve in one's career appears to be related to middle class status, and hence to the judged desirability and presumed attainability of goals.

17

THE FAMILY IN VOCATIONAL DEVELOPMENT

The family is a social, a psychological, and an economic entity. It is social because it consists of several people who function as a unit. It is psychological because its members have needs, attitudes, and feelings which are important to themselves and to the functioning of the family as an entity. It is economic because it provides certain services, because it manufactures or processes certain goods, and because it distributes these goods both within and without the family unit. The role of the family in vocational development might therefore be viewed from these different perspectives in several different chapters focusing on social, psychological, and economic factors. To some extent this is done in this text: for example, in Chapter 6 the role of the family in providing exploratory activities has been considered. But it seems advisable to consider the role of family in a more integrated way in a chapter devoted to that subject.

The family may be dealt with *subjectively,* as a function of the attitudes and interpersonal relations of its members, including the father, the mother, the child, and his siblings. Or it may be considered *objectively,* in terms of the composition, the economic resources, and the activities of the family. Identification with a parent clearly falls under the first of these headings, and the finances which the parents have to draw on in educating the child obviously belong in the second. Experiences which the child or youth and his parents share with each other are not so neatly classifiable in these categories, for they are both objective (e.g., building a shed) and subjective (the verbal and nonverbal transactions which take place between father and son in doing the building). Both aspects are clearly important, but at times it is more helpful to focus on one or on the other.

ROLE OF THE FAMILY IN VOCATIONAL DEVELOPMENT

We have seen that the family provides opportunities for boys and girls to identify with or to reject various adult role models. It creates or fosters needs and shapes values. It provides experiences with a variety of activities, with opportunites for acquiring information and skills relevant to occupations. It has or lacks resources in the form of equipment,

funds, and contacts which make occupations accessible or inaccessible. Thus the family exerts more or less subtle pressures on the child and youth to make certain types of choices. Each of these kinds of influences may therefore be expected to be found at work shaping preferences, entry into training and work, success, and satisfaction.

Preferences. Children begin to acquire social attitudes and values early in life, first from their parents and then from their peers in the neighborhood and at school. Since vocational preferences are attitudes toward work and toward occupations, it follows that children who identify with their parents and their subculture early begin to develop preferences for the types of occupations which their parents value (184, 200, 202, 250). Berdie (29) has shown that college attendance is largely dependent on family influences. In a society with a tradition of upward mobility, such as that of the United States, this means that children of parents from the lower socioeconomic levels tend to aspire to occupations which are higher than those of their parents, while those who come from more privileged homes tend to have preferences for vocations which are at the same relatively high levels as those of their parents (228).

This means that boys and girls from the less privileged levels are likely to have no suitable occupational role models in the family, and few family activities related to their aspirations. If they aspire to occupations which are above those of their parents they are dependent upon exceptional relatives, upon the school, and upon fantasy sources such as fiction and the movies, for information as to what it is like, for example, to get a higher education or to work as a lawyer.

The family contributes in other, more subtle ways to the development of vocational preferences. Social status and social mobility are not the only social bequests transmitted by parents to their children. Since children tend to be reared in the religion of their parents, it is obvious that religious values which affect behavior may be expected to affect the vocational preferences of youth. The Calvinistic emphasis on individual responsibility and enterprise may be expected to result in more preferences for executive, professional and self-employment than the Roman Catholic emphasis on the acceptance of authority and fitting into the established scheme of things. The Quaker interpretation of Christian teachings may be expected to produce more social workers and teachers than professional soldiers, whereas in the less Europeanized Moslem culture, preferences for military careers outnumber those for social work and teaching. Roe (265:47) found no Roman Catholics in her sample of eminent biologists. Knapp and Goodrich (178) found that Catholic institutions produce fewer scientists, proportionately, than do other

colleges and universities. Other studies, such as one by Davis (80), have shown that the Protestant religious groups which exercise the tightest control over the beliefs and fields of inquiry of their members, like the Roman Catholic church, produce proportionately fewer eminent men than do the churches which allow more freedom of inquiry and exercise less control. Evidently the values of the more authoritarian Roman Catholic and Protestant churches do not encourage scientific inquiry and individual enterprise as much as do those of the more liberal Protestant and Jewish religious groups. Individual differences exist even within subcultures, resulting in exceptions to these generalizations, but the cultural forces exist and operate nevertheless. Sometimes other cultural factors intervene, as in one study of white collar workers, including many high level employees (209), which found no differences in the mobility aspirations of Protestants and Catholics. The authors suggest that these Catholics, as white collar workers, were mobile and had internalized the Protestant ethic which has been the traditional ethic of most of North America. Unless such factors are taken into account, some of the dynamic factors which affect vocational development are missed.

Entry. As the adolescent prepares to enter the world of work, the adequacy of role models appropriate to his vocational preferences begins to have a more obvious effect on behavior. How he goes about entering his chosen occupation is determined in part by the adequacy of his information about that occupation, by the extent to which he has been able to observe others entering and working in that occupation. Whether or not he seeks the best type of training for it, under appropriate auspices, depends partly upon the quality of his contacts with people in that occupation. Whether or not he applies for jobs in the proper places, at the proper time, and in the proper manner, also is in part a result of how much opportunity he has had to observe others going through the same processes, and of the adequacy of the understanding of the occupational mores which he has acquired through family activities, discussions and contacts (13).

The experiences to which the family has exposed the developing child and youth also play a part here. For example, early independence training plays an important role in entry into work. The youth who has for years been practicing making decisions and taking action has no great difficulty in seeking information himself, in deciding where, when, and how to apply, and in carrying out these decisions. Thus we have seen that in several unpublished studies of Air Force flying personnel it was found that men who had learned to drive a car early, who had started buying their own clothes early, and who had had boyhood work experiences were better able to

handle the stresses of survival training and of combat than were men who had not had these and similar independence training experiences in childhood and youth. Since the degree of independence exercised by the child and youth and the speed and wisdom with which it is exercised are subject to parental control, it is clear that the family has much to do with the ease with which the youth enters the world of work and an occupation.

The family's resources constitute the basis for another kind of family contribution to vocational development. It has been well established that contacts are the principal source of jobs, and that most of the contacts of young people are family determined (96, 151). This means that the young man or woman who comes from an upward mobile middle class family has access to any number of different types of openings. He can, in good times, choose between a substantial variety of job opportunities. They may not actually be seen as offers, but they do exist as potential openings. Business or professional friends of the father, neighbors in influential positions, provide contacts which may be discreetly exploited in order to open up desired types of opportunities. The upward mobile tradition constitutes a sort of vocational *noblesse oblige*—it is cricket to lend a hand to the aspiring son or daughter of one's colleague or neighbor, who is to be lauded for being ambitious. On the other hand, the son or daughter of a semi-skilled worker finds that his contacts, both actual and potential, are limited. His father's co-workers are not employers of men and women, but employees. They are not decision makers, but rather the means of carrying out decisions. This is likely to be true, also, of the family's neighbors. Hollingshead (151) has described, in exaggerated but partly warranted terms, the degree to which the job opportunities of lower class youth are limited by social status.

Furthermore, family resources include not only intangibles such as information and contacts, but also tangibles in the form of capital and credit. The role played by these in financing education and training, and in setting up a new business or professional enterprise, hardly needs elaboration.

One of the cases described by Roe (265:16–17) illustrates the family's role in providing experiences and contacts, and in determining values. It is quoted below. The role of one grandfather's hobby, the other grandfather's inventing activities, the father's gift of a tool kit and of a camera, the summer with the veterinarian relative, the discussion with the surgeon cousin, all document the part of the family in shaping vocational preferences and determining entry into occupations.

> My paternal grandfather was a business man interested in natural history, with a cabinet of curios and I think that since from before I could speak I was being shown minerals and fish skeletons, etc. My other grandfather was an inventor still

making gadgets of various things. So from as early as I can remember I had an interest in natural things and in designing of apparatus. Father was a business man with no interest in science.

When I went to college, I was quite uncertain of what I wanted to do. In prep school I had had good teachers in Latin and math. I thought in my freshman year I was going in for the classics. My father gave me a good camera and I got to wandering around in the woods and took pictures. I stumbled on a couple of books on photographing birds and I'd been given some books on natural history which I remember now I rather liked, but I had no idea of being a biologist until the end of my first year at college. I got interested in bird life photography, photographed a few nests and knew a few species. But I knew it was natural history after that summer and went to my advisor at the beginning of my second year and I told him I wanted to put biology down in my curriculum and the only course that could be displaced was Latin (this was the Latin professor) so he said okay and I began to study biology and I have the most vivid memory that the first day in class I knew this was what I wanted. It was like a religious conversion.

In the same summer that I was doing the bird nest photography, I was visiting a relative, a veterinarian, so I had seen a good deal of veterinary practice without the thought of being one. I don't think I got any conscious stimulus to go into biology from that but I know I got some from reading Department of Agriculture reports on his shelf on cattle tick fever. That added to the interest from the birds. It was a feeling that here was an awfully interesting story involving animals and the microscope. In the first year it was more the techniques of the lab, the use of the microscope and the methods of study that attracted me.

Before that when I was still in prep school, oh, I must tell you that beginning in grammar school I took a great interest in tools. Father gave me a kit and I had a workshop in the basement. So I built some simple electrical devices, got books from the library and I ran into a little odd thing which I've never seen referred to again, something that happened when I hooked up some electrical gear and I wrote to the editor of a scientific monthly. It didn't send me into physics. The editor wrote back that no one had noticed it and I must go into it some day. I had physics my freshman year in college. I did very badly in it, just barely got through.

Failure to do well in math and physics got me away from my interest in electricity. And then biology interested me. (When did you learn about research?) I must have been aware before I left college that people like myself could go into investigation. I did so well in biology in college, never less than 95, that a junior teacher suggested to me that he thought I might get a fellowship in biology. This had never been given at that level before I asked. The professor said it couldn't be done but he fixed it up for me to go to a biological laboratory that summer, where I worked by myself. I had a problem in mind, the teacher had suggested one, but I felt that problem was impossible. So I said I'll just see every kind of animal I can find. So I went to work and made a note book in which I drew. One of these protozoans developed an interesting phenomenon so that I did what amounted to beginning research in my first summer out of college. I thought then I was going to return to biology. I had a cousin, now deceased, a surgeon who sent for me. Mother may have put him up to it, I never asked her. They knew very little about

the career of a university teacher and one of the few teachers mother knew was a baffled man. Mother had wanted me to be a minister. He (the cousin) told me it would take brains to make a career in science and any fool could make a living in medicine.

"So he went to medical school, and 'fell into the department of anatomy,' and was very shortly doing research. The professor 'was a great man and very exacting. The kind who gave no help until the paper was written and then said it's no good, do it over again.' He became interested in a particular branch of medicine. . . ."

The family is frequently thought of as determining the careers of its members through its economic interests, affiliations, and values. That it does this to some extent is often observed, and studies such as McArthur's analysis of the values of college students from upper and middle class homes (201), Douvan's (89) and Rosen's (274) studies of achievement motivation in relation to socioeconomic status, and Porter's (250) and Larcebeau's (184) studies of vocational choice in relation to father's occupation support the notion. But it is easy to overgeneralize. For example, big business is often viewed as monopolized by a relatively small oligarchy, but its executive ranks have been shown to be increasingly open to men from lower social strata (3, 350). Similarly, it is often contended that military and naval careers are "inherited," in the sense that army and navy officers tend to be recruited from the sons of officers. But in 1951 Herring (150) showed that West Point applicants from 1842 to 1925 tended to be sons of nonmilitary men, largely from business and the professions (55%), but also sons of farmers, skilled, semi-skilled, and unskilled workers. Again, in 1956, Riessman (259) reported that of 667 generals with male children, 600 had none in the service, and only 67 had one or two sons in uniform; 585 had no daughters with army husbands, while 82 had daughters with army husbands. In view of the exposure of these sons and daughters to military careers and potential military husbands, and the known tendency of like to marry like, these numbers hardly justify the stereotype of family determination of military careers. The influence of the family is more subtle.

Success. Once the individual is launched on his career, the influence of the childhood family by no means ceases. In fact, marriage brings to bear the influence of still another childhood family, that of the spouse. In the childhood family there is opportunity to develop values and attitudes, patterns of behavior and even mores, which affect vocational behavior in adulthood. Ministers whose childhood mothers were sought out by others are more successful than other ministers (4). In discussing the eminent biologists whose success she studied, Roe (265:65–66) states:

It would seem that for these biologists, the pattern of relatively superior educational and occupational family background, with a higher evaluation of intellectual interests and a lesser emphasis on warm personal relations, is a fairly constant one. The continuance of this pattern in terms of somewhat delayed psychosocial development, in the intellectualization of interests, and in primary concentration on vocational interests is entirely constant. . . . These are the following: a background in which intellectual activities are valued; an intense emotional need which can be satisfied by activities of a research nature; the ability to concentrate energies, probably reinforced by early experience of rewards for such concentration.

Family structure plays a part, through the nature of the role models provided. The role of the warmth of family relations is brought out by Roe's work, and leads to speculations concerning the family backgrounds of those who go into other occupations. If research scientists have lacked a warm family relationship, have social workers enjoyed warmth? And what of businessmen? Ministers whose choice of career was favored by their mothers, and who were treated as equals in childhood by their mothers (4), were more successful in the ministry than other men.

The work and play habits of the family are important, too, as Roe's data on intellectual activities bring out. The child and youth who has seen his father spend most evenings in his study, engaged in serious reading and writing, and whose family recreation has included a good deal of reading aloud and discussion of intellectual matters, brings to his career a distinctive set of values and patterns of behavior. They are quite different from those of the person who spent his childhood in a home in which evenings and week ends were spent in listening to the radio or watching television, doing domestic chores, or playing bridge or poker, golf or softball. The former person, if he has accepted the values and attitudes of his family, is likely to view leisure time as something to be used for furthering his own intellectual-vocational development and that of his family; the latter person, on the other hand, is likely to view it as something to be used for entertainment or recreation. Other things being equal, the vocational success of the former is likely to be more substantial than is that of the latter individual. As Roe puts it (265:65) and as Charters showed (66), the eminent scholar works "day and night, workdays and holidays . . . happiest when working."

While it is not just the childhood family structure that accounts for this, it is clear that this is one of the contributors to this type of adult behavior. Habits and expectations of success in the childhood family also constitute a basis for later vocational success. The person who grows up in a home in which he is given experiences of success, in which his successes are rewarded but at the same time expected rather than made much of, develops habits of success which carry over into school, social life, and work. They carry

over, that is, in so far as the activities in which he engages are appropriate to his abilities and training. But since the acquisition of habits of success is dependent in part upon good guidance in the choice of activities, the person who has had good guidance in the past, has made wise choices, and has acquired the habit of success is, other things being equal, also likely to make good choices in the future and to continue to find success.

Finally, we have seen in the section on preferences that religious and cultural values, transmitted by the family, play a part in determining not only in what field a person will prefer to work, but also how hard he will work. As Mueller (225) puts it in discussing marriage, they help determine whether or not a person "finds himself in 'Who's Who'!"

Satisfaction. The influence of the childhood family once the individual is launched on his career is not limited to success; it is also an important determinant of satisfaction. This was made clear in Roe's comments on the satisfactions found by her biologists in their research activities, and it follows from the fact that needs and values tend to be to a considerable extent family derived. This is true whether there is acceptance or rejection of the family value system. Not only are needs and values formed by the family, and modified by later peer-group experiences, but so is the self-concept. When needs and values find adequate outlets in the vocation, when the role which the occupation requires or permits one to take resembles the role which one has come to want to assume, one would expect the individual to be happy in his career.

There is some justification for accepting the hypotheses just set forth, for they not only make theoretical sense, but they have been sustained by the few studies which bear on them. In his investigation into the relationship between need satisfaction in work and job satisfaction, Schaffer (279) found a substantial correlation (.58) between over-all job satisfaction and the degree to which the individual's two strongest needs were satisfied by his job. Friend and Haggard (108:105) similarly concluded:

> . . . it seems clear that people react to certain working conditions with attitudes molded from the clay of their personal histories; that these attitudes represent adaptive efforts to find work satisfactions which will fulfill the needs inherent in these histories. The caliber of the molding rests, in large measure, on the caliber of the role model, the extent of family unity, and the degree of negative or positive feeling for parents—in short, on the emotional security or insecurity of childhood. The nature of the demand and the nature of the earlier deprivation are plainly related.

The case of Warren Hollis, described by Friend and Haggard (108: Ch. 13), provides a good illustration of the role of family-derived needs and

values in the achievement of both success and satisfaction. Warren's childhood home life was such that his need for a strong authority to whom he could relate himself was very great, as was his need to achieve a secure position in the world of work. Reacting negatively to the lack of such qualities in his father, and positively to his mother's strengths, he developed into a successful and satisfied worker despite a family situation which looked most unlikely as a source of well-integrated and effective persons. The description of his case, which follows, is taken from Friend and Haggard by permission.

A CASE STUDY

Warren came to the Vocational Counseling Service when he was sixteen and in the first year of high school. Most of his classmates were planning college, but that was out of the question for him. He wanted to learn to be a mechanic so that he could get a job right after completing high school. "Perhaps I should transfer to a different school?" he asked.

A pale, frail-looking boy with a slight lisp, Warren entered wholeheartedly into a discussion of available courses and their relation to later jobs. His knowledge of work requirements bulked large for a boy his age.

Three things stand out in Warren's childhood: the constant unemployment and frequent desertions of his father; Warren's many illnesses, along with those of the rest of the family; his deep affection for his mother, a strong, resilient woman. The case record described her as "shrewd, spunky, quick-tongued, outspoken, loving an argument." Perhaps her strength accentuated the father's weakness; yet it was she who managed to keep the framework of the family unit intact despite great pressure. Warren is the second of six children and the oldest of four boys. There is an older sister to whom he had always felt very close. So meager and irregular was the income that the family lived in miserable flats, dark and damp. To keep warm, they used the one heated room during the day; at night the contrast of the ice-cold bedrooms probably contributed to the succession of illnesses which plagued all of the children. Warren was in the hospital for long periods and developed a serious heart defect. Mrs. Hollis' own health was poor and although she carried the full load of managing the home and children on a low income, she was faithful about having each child's health checked regularly at the clinics.

Described as an efficient worker, Mr. Hollis lost job after job for being too independent and hard to get along with. After a while he would work only as a house-to-house salesman because he could do as he pleased. He would disappear for weeks, and, when he was at home, showed little interest in the children. To them, he appeared to be merely a source of irritation, and they spoke of him as "a non-entity in the home." The psychiatrist who examined Mr. Hollis reported a diagnosis of "psychopathic personality." When Mrs. Hollis learned that he was accompanied in his wanderings by a woman, she refused to have him return, and stood by her decision. Warren was about seventeen at this time and seemed to feel that the family was better off without Mr. Hollis. There was more freedom and peace in the home, he said. His father used to get angry so often and his mother was the chief target: "I don't think he liked her very well."

On only one occasion had she ever seen Warren lose his temper, his sister reported. His mother had reproved some neighborhood boys and they retorted rudely. "Warren went after them like a streak." After one of his illnesses Warren guessed that he'd never be strong enough to marry and have his own family, and he decided to stay home and care for his mother. After his father's departure, the family moved to a better flat where the family morale was distinctly higher. All of them enjoyed singing, which the older girl led at the piano. There was a strong sense of solidarity despite the father's absence. While she accepted each child as an individual, Mrs. Hollis also held them to reasonable standards.

Because of his heart damage, the physicians limited Warren's activities, and even the doctor for the summer camp turned him down. Yet he had a paper route, worked at odd jobs for the landlord in partial payment of the rent, and supervised the tool crib in high school. Flying fascinated him; and he liked to play cards.

A slow starter, Warren warmed up gradually to the counseling talks; it took a little time for him to feel comfortable and throw out his ideas. In a realistic way, he weighed the advantages of clerical work, which his mother favored because of his health, against those in mechanical jobs, which he liked and knew he could do. But, he emphasized, she would usually let him make his own decisions. To be sure of a job right after high school was especially important. It would be hard for him to finish because they didn't have much money; yet he was determined to get his diploma. That was why he wanted to switch schools and learn one trade well. He hoped to become an airplane mechanic or a chief engineer some day, but guessed he could be satisfied with any kind of mechanical trade.

Aptitude tests confirmed Warren's estimate of his mechanical aptitude. Good intelligence and strength with mathematics showed up, too, and widened his choice. Actually, his chances of finding a job were better at the time with more concentrated training; and since it seemed important to him, the counselor backed his desire to transfer to trade school. Warren spoke enthusiastically of the improvement in his health, of his ambition, of his eagerness to earn money. He lost no time in effecting the transfer and decided on one of the lighter trades which had been discussed.

On completing high school, Warren returned to talk things over at a time when jobs were very scarce. He had a number of ideas, however, and responded with enthusiasm to the job information discussed. One of his instructors at school had been a "great help" in making part-time jobs available and was his favorite teacher. (Years later, he spoke again warmly of this teacher, with whom he was still friendly.) Warren had enjoyed his course and had done well. Although his friends expected to loaf, he had high hopes of finding something in his line, work that he knew he could do. His mother was ambitious for him, made him want to do something "worth-while." She was "great."

Whether his earnings are large or small, Warren turns half of them over to his mother. He glories in their freedom from debt and the existence of a substantial family bank account. Now in his late twenties, he plans to marry and is interested in a particular girl, who, because of her family circumstances, keeps delaying the marriage. Warren accepts the delay rather easily, and his attachment to his mother plays a part in this. He wants a large family and feels that such a family helps a person to learn to get along. In his responsibility, and in his role of a skilled, steady

worker, Warren has completely reversed his father's immature pattern. The family have their ups-and-downs, their fun and their fights, but they are very much of a team, with Mrs. Hollis calling many of the plays—plays which have been discussed and agreed upon beforehand.

Warren has had only two jobs since leaving school some ten years ago (prior to the final report). In the first one (during the depression of the 1930's), he started at $8.00 a week and did general repairs since the shop was small. This gave him the opportunity to learn a number of mechanical processes, and he liked the work, as well as his employer, whom he described as "friendly and interested." After two years, during which he received a few increases in pay, Warren left for a job with a large manufacturer of technical apparatus where he is still employed. The company, he believes, is a good one; and he is satisfied with his progress. He feels very much a part of the plant, and in turn knows that they rely on him as an all-around mechanic who can help out in almost any department. Some day he hopes to be a general foreman. Although he disapproves of some of the company policies, he feels that essentially they are fair; that he knows where he stands with them. When his rate is too low, he fights until it is raised. As lead man, he "goes to bat" for his crew—"if they deserve it."

He hoped to be drafted, but, when turned down because of his heart, expressed satisfaction that the company was doing war work; that he was working a sixty-hour week. During the war, his earnings ran around $125.00 per week, but the reconversion period slashed them appreciably. Warren believed that this was a temporary setback, however, and his outlook was an optimistic one. "With these two hands, I can always do all right. The company isn't perfect, but I feel right about working there."

He likes his boss, who plays cards with him frequently, and shares decisions about the planning of production for the department. But he deplores favoritism and scorns the men who let the boss win for a purpose—who "polish the apple." Getting ahead, in his opinion, should be on the basis of "know-how" and "can do," but these two factors, he feels, should be fitted into the framework of length of service. A man should be rewarded for seniority. Whereas job rates should be fair, he insists, the worker's pay is secondary to equitable treatment or regard for him as an individual. That the executives call him "Warren" pleases him, as does his bonus for a suggestion which increased production.

Looking at the values especially meaningful to him, good physical conditions are accentuated, for Warren is understandably health-conscious. His unusually strong emphasis on a friendly boss who takes a personal interest is perhaps an expression of his quest for the security of a stronger parent-person than his own weak father. The realistic, affirmative quality so outstanding in the boy has persisted in the man. Although better than average, he recognizes that he is not a top worker and accepts the fact that a fellow employee deserves the supervisory job that they both wanted. "He has better training and experience for the job." That is the fair basis for promotion, he believes. He feels that the men should "stick together" and berates the worker who "grabs" for the high-rate jobs. 'Live and let live,' I say."

His health, though improved, is still under par. Perhaps because he has to take care of himself, his life is rather routinized, with regular nights for movies and

cards. He describes himself as a "great sleeper." Occasionally he will "take a flyer at the races."

Three phrases run through his conversation: the value of "standing on your own two feet," of being fair, and of freedom from debt. Conspicuously absent are devious expressions of resentment at early difficulties or of fear of failure. Other salient characteristics are his flexibility, and his freedom from indecision about earning a living, or ambivalence about his father or his family. Confident of his ability to measure up, he goes about his work and his life in an integrated fashion. There is evidence of sturdy staying power, and good sense of give-and-take, and considerable persistence in overcoming difficulties. Instead of dwelling on them, he tends to make the most of his strong points and of his opportunities.

What Warren has to work with—his good abilities and aptitudes—have grown and rounded into an effective, efficient, smoothly operating unit, unhampered by resentment and self-doubt, a unit geared to the demands of industry. But it is a unit regulated by a self-starter, not by remote control. He feels that he is running his own show within bounds which he can predict, since he knows where he stands with his company. He has moved forward, and is certain that he can keep going. So he is pretty well satisfied with his job in particular and with life in general.

Looming large in Warren's good work adjustment are his mother's strength and spirit in handling her own life and the affection between her and Warren. She stimulated a belief in himself, the development of a good degree of independence, the feeling that he wanted to amount to something, and the stability which has helped him to push forward despite hard times. So he has succeeded in being as different as possible from his father, and has grown into a steady, responsible, skilled head-of-the-house—a house that is secure. The family has worked as a team, a team which gave Warren backing as a person, and ease in working with others. Instead of reaching for the moon, Warren has compromised with substitute satisfactions: a trade when a profession was impossible; an interested teacher in school; a friendly, fatherly boss—satisfactions which partially fill the void created by his weak father.

CONCLUSIONS

In this chapter we have seen, in the results of research as well as in case studies, the role the family plays in shaping needs and values, in providing positive and negative role models, in establishing patterns of work, play and interpersonal relations, and in providing resources for the implementation of self-concepts. The family has an important influence on the vocational development of the individual.

18

ECONOMIC FACTORS IN VOCATIONAL DEVELOPMENT

Economists, concerned with problems of society and of business, have given surprisingly little attention to the vocational adjustment of individuals as an economic problem. Supply and demand, business cycles, technological change, labor problems—these and other topics have long been studied, but as social and business problems rather than as problems faced by individuals personally. Some exceptions to this statement do exist, partly as a result of the depression of the 1930's and partly because of the influence of sociologists and psychologists who have helped personalize economics. Students of social and occupational mobility, of occupational distribution [who, as Thomas points out (332) have also been too few], and of unemployment have contributed to our knowledge of what might be called vocational economics, particularly in recent years.

The as yet embryonic nature of this science makes it necessary to draw from a variety of only partially relevant sources, and to adapt data gathered in other connections to this problem. Until a vocational economics is available we must rely largely on such studies as a discussion of factors in occupational change in Anderson and Davidson's *Occupational Trends* (6, 7), on Parnes' *Research in Labor Mobility* (239), Jaffe and Stewart's *Manpower Resources and Utilization* (164) and David's *Postwar Youth Employment* (77), and on Thomas' unique text on *The Occupational Structure and Education* (332).

SUPPLY AND DEMAND

One of the best-known concepts of classical economics is that of supply and demand. Applied to goods this concept refers to the relationship between the effective demand for a product at a given time and place and the supply of that product then on hand. When the demand is great and the supply small, prices will be high; conversely, when the demand is slight and the supply great, prices will be low.

Students of labor problems have utilized this concept in connection with wage rates. They have pointed out that services (labor) are sold just as are goods. When a particular type of skill or service or knowledge is rare and in

demand it commands a high wage; when it is plentiful in relation to the demand it is in no position to bargain and must be satisfied with a smaller reward. It is recognized that labor does not sell its services in the open market, just as most commodities are not sold without restrictions, and that supply and demand are not the only factors which fix prices and wages. But their importance is generally admitted.

Traditional economics suggests that the ratio of the supply of workers of a given type to the demand for the services which they are able to render will be a fundamental economic factor in vocational adjustment. Occupational trends, which reflect business, industrial, and social trends, show that these two factors vary from time to time. During the period of the First World War, for example, the services of skilled industrial workers were at a premium as a result of the boom in war industries. For some years after the war, except for the brief depression of 1920–1921, their services were required to produce the machinery and tools of expansion. The shrinking economy of the 1930's however, cut down the demand for skilled workers in the heavy industries. Many of these were therefore unemployed, and those who did work were not so well nor so regularly paid. New factors then began to work, and fewer skilled men were trained, with the result that business improvement in the late 1930's caused the demand to be greater than the supply of skilled workers, producing a boom in those occupations which continued after World War II.

Manpower Shortages and Surpluses. These manpower surpluses became the subject of considerable study and some experimentation during the depression of the 1930's, and the shortages attracted much attention during World War II and the decades of prosperity which followed it. The Minnesota Employment Stabilization Research Institute (243, 299) was set up to study psychological and economic factors in unemployment, and to experiment with ways of minimizing it. Studies were made of employment trends, worker aptitudes and job requirements were analyzed, and retraining programs were instituted as means of getting displaced workers back into employment. The pattern of operations set up by this institute was followed on a national scale by the United States Employment Service. With the shift from surplus to shortage brought about by the defense industry and subsequent war booms of the 1940's the obverse side of the problem in due course became acute. Occupational and geographic mobility became vitally important as new industrial plants sprang up in some parts of the country and as government and business jobs multiplied to manage production and distribution. The USES became essentially a manpower supply rather than an unemployment alleviation agency.

With the end of World War II the shift back to civilian production and distribution necessitated further transfers of manpower, both occupationally and geographically, but continuing prosperity continued the manpower shortages and even made them more acute. By the middle of the 1950's an anticipated surplus of engineers had turned into a serious shortage, with engineering colleges producing only half as many new recruits as industry was seeking, even with beginning engineering salaries having increased by fifty per cent from 1946 to 1953, and doubled from 1946 to 1956 (New York *Times,* Jan. 29, 1956), in the frenzied competition for scientific and technical talent. At the same time, colleges, schools, department stores, police departments—not just industries with technical requirements—were lamenting the manpower shortage. The National Manpower Council (373), financed by private funds, the Conservation of Human Resources project with industrial subsidies (125), various learned societies (365), and many other private and public bodies were studying the manpower shortages in order better to understand them and to find ways of alleviating them.

Significance to Personal Welfare. The above are familiar economic facts. What is less well known is their significance for individual careers and personal welfare. Follow-up studies of high school and college graduates show that those who seek to enter an occupation at a time when the supply exceeds the demand have difficulty in getting a start (23, 173, 324), and that this delay in many cases results in permanent changes in the individual's plans and in lower pay for many of those who do get a foothold in the desired occupation. If the decreasing demand is a long-term rather than a short-term trend those who do get a start in the occupation move ahead in it more slowly and often fail to rise as high as they would have in better times. The availability of an ample supply of workers who could fill these jobs lessens the premium put on the worker's services and may even undermine his sense of adequacy and security. Under conditions of slow promotions, few transfers, low pay, economic insecurity, and an undermined feeling of social worth, job satisfaction is not likely to be common.

When demand exceeds supply the converse of what has been said is true. Then people of lesser ability find it relatively easy to obtain employment, marginal workers are regularly employed, promotions are rapid and easily won, earnings are high. Persons with real ability quickly win recognition and establish themselves. These trends have been especially noticeable during mining and war booms. A superficial spurious type of job satisfaction is likely temporarily to accompany such swings, followed by underlying dissatisfactions.

Factors Affecting Supply and Demand. Supply and demand do not,

however, operate in a vacuum. The labor market is not an open market. *Tradition* confers a preferred status on some occupations, so that those who succeed in entering them earn more than the mere demand for their abilities would justify. In Western culture executive abilities are often given a very high valuation, not because good executives are harder to find than good research men, for instance, nor because their employment results in relatively greater profit than does the employment of research skills, but because of social custom which accords them more prestige and prescribes the payment of higher salaries. These traditions vary not only within a culture, but even within companies, some concerns paying their senior executives much less than do other companies of similar caliber.

The restrictions imposed upon employment by *unions and professional organizations* which control training and certification are another type of factor restricting the free play of supply and demand. Minimum wage agreements may keep up the earnings of employed union members even when a large supply of unemployed members exists. Although the ratio has now been reversed, limitations of the number of students admitted to medical schools for some time provided fewer physicians per capita than formerly, at a time when medical services were more widely recognized as necessary. Consequently, physicians generally earn more than men in other professions. The increasing number of nurses has more nearly kept pace with increases in the general population. Nurses are less well organized to create and exploit a monopoly; even a shortage condition has not enabled them to become a well-paid profession, although their status has improved. This, and certain other factors affecting supply and demand, are discussed later in this chapter.

The cost of training is another factor which operates to limit the supply of workers in some areas, medicine for instance, and to increase it unduly in those in which training is brief and inexpensive, as in the semi-skilled and clerical occupations.

Changes in the sex and age composition of the labor supply or in the demand for workers may also affect individual fortunes, even though the ratio of supply and demand remains constant. If men tend to leave or not to enter an occupation, and if women tend to take the places left open (as happened in teaching at the time of the Civil War), the men will, if no one feels that it is particularly desirable to keep them in that field, be paid less in it than formerly because of the availability of a cheaper feminine labor supply. If, on the other hand, school administrators and boards consider it sound educational policy to have a number of men teachers in each school, they will increase the salaries of the men teachers sufficiently to attract and

hold good men, continuing to pay the women less. The former was the case after the Civil War, whereas after the First World War the latter consequence was observed. Later the depression of the 1930's caused men to seek the relative security of teaching, with an additional depressive effect on salaries. The World War II boom, on the other hand, attracted men away from teaching, with an accompanying rise in the salaries of teachers in general. That these trends are not always noticeable is the result of the simultaneous operation of other factors treated in this chapter. Tradition, the intertia of legislative bodies, professional organizations, legal provisions, etc., have kept the salaries of men teachers from declining as much as they might have during the depressions and from rising greatly during years of prosperity.

Finally, the operation of supply and demand is affected by the geographic and occupational *mobility of population,* a problem on which the Social Science Research Council (237, 239) has focused considerable attention. A shortage of one type of worker in one area may provide opportunities for excess supplies of workers of the same type in other areas. Or it may create openings for workers in other occupations who can transfer to that in which the shortage exists, if they are sufficiently mobile in terms of space and abilities. The ratio of supply and demand at the time and in the place in which a person is seeking to enter or to make a success of an occupation, and the related economic factors which affect supply and demand, will open or close the doors of opportunity and thus affect vocational adjustments.

BUSINESS CYCLES

Changes in supply and demand are, it has been indicated, often the result of cyclical changes in business activity. Business cycles may therefore be considered another important economic factor in vocational adjustment. The concept of the business cycle is one which hardly needs explanation today, the sequence of prosperity, depression, and prosperity from the 1920's to the 1940's and later having brought about widespread awareness of changes in the volume of business activity and its effect on employment, earnings, and standards of living.

Studies of adjustment problems during depression and prosperity, particularly those of young people leaving school, have thrown light on the effects of business cycles on vocational adjustment. Outstanding in this category are the investigations of the American Youth Commission (23, 24, 253, 325), an organization which brought together the results of youth studies throughout the country, made studies of its own, and stimulated local groups to study the problems of youth. Follow-up studies of high school and college gradu-

ates, the most ambitious of which was that made by the New York Regents' Inquiry into the Character and Cost of Public Education (96), added information on the subject of vocational adjustment during good and bad times. The newspapers, during the years after World War II, frequently carried stories on the high salaries being offered college graduates and commented on resulting attitudes.

Effect on Youth. High school and college graduates who enter the world of work during a period of depression find it more difficult than do their fellow students who graduate in prosperous years to obtain a foothold in the desired occupational field. It is again a matter of supply and demand. The size of the gap between graduation and first employment is consequently in part regulated by the business cycle. More graduates find it necessary at the bottom of the cycle to start work at lower levels in the occupational scale, and fewer succeed in improving their status when the upward trend sets in. Thus a study (173) in one liberal arts college showed that, whereas about three-fourths of its prosperity graduates had begun their working life in professional, managerial, or clerical occupations, only one-half of the depression graduates began at those levels. After four years had elapsed, during which conditions had improved substantially, only a tenth of the total group had shifted from the lower levels to higher types of work such as the pre-depression graduates had entered. Similarly, observation suggests that during the industrial boom of the 1950's some students have found an appeal in entrepreneurial work which is, for them, not genuine.

Effect on Adults. It is not just the recent graduates or dropouts of an educational institution, however, whose vocational development is affected by cyclical changes in business activity. The vocational histories of older men and women show that the downward trend brings about a reclassification of many workers at lower occupational levels. The less capable workers in any group are the first to be dismissed as the loss of markets and the decline of consumption and production begin to be felt. These people, unable to find employment in their own occupations, often re-enter the labor market at lower occupational levels. Thus a general downgrading is brought about, with the consequence that the major burden of unemployment is borne most heavily by the clerical, semi-skilled, and unskilled workers (16, 38, 122).

Associated with this trend is a shift to noncompetitive occupations, as evidenced by the increased popularity of teaching and civil service jobs in depression years, which in prosperous times have difficulty finding enough good applicants for the higher grade positions. The greater economic security of these occupations, which results from the fact that they are dependent on relatively stable sources of income, proves especially attractive in a

contracting business era, whereas the greater possible rewards of competitive business and industrial enterprise seem more alluring in an expanding economy. The industrial boom of World War II thus reversed the shift toward noncompetitive occupations. As a result many people not particularly well suited to teaching and similar stable occupations enter these fields at the bottom of the cycle, and as business improves and other types of vocational opportunities become more numerous and attractive, some of these "misfits" shift to other fields where they may be both more successful and better adjusted. The rise of the curve of business activity brings more than better adjustment in its wake, however, for the financial advantages of certain fields also attract some people who would be relatively more successful in more static occupations for which they are better qualified. Individual and occupational differences are often neglected, and it is not realized until late that "a good field" may be good for one man but bad for another.

The alternating swings of the business curve may be thought of as correcting each other to a certain extent, in downgrading some who were placed too high for their own best adjustment as a result of good years, and in upgrading others who were placed too low as a result of bad years. This is no argument in favor of business cycles, for at the same time the occupational status of a larger number of other persons is changed for the worse, if judged by their vocational adjustment. Downgrading is, in a society such as ours, a painful experience. The majority of men who are forced by circumstances to accept employment at a level below the highest at which they have been placed are dissatisfied with their jobs, whereas the majority of those who have maintained the highest vocational level are satisfied (306). This is no doubt due in part to the fact that some are less well placed after downgrading than before, in part to loss of income and lowered living standards, but also in many cases to the feeling of having lost status among their former friends and in the eyes of the world. Upgrading, too, can be painful, for it also brings a new, perhaps strange, way of life and calls for readjustments.

TECHNOLOGICAL CHANGE AND AUTOMATION

Closely related to the preceding factors is one which has been more widely studied and discussed as a force in vocational adjustment, namely, technological change. This is generally thought of as a factor which operates in manufacturing and mechanical industries, but it is important in other fields as well. Telegraphers, for instance, have been replaced in most cases by women teletypists as a result of the introduction of improved

methods and machines. Stenographers are slowly giving way to dictaphones and typists, and the latter may in time be abolished by dictaphone records which can be sent through the mails or placed in a transcription machine to be automatically typed up. Bookkeepers are being replaced by office machines and relatively smaller numbers of machine operators. Old occupations in the professional fields also are being modified and new ones created by science and technology. Thus practical nurses, instead of being displaced, play a more important part in the medical profession than in previous years, while special nurses, nursing supervisors, medical technologists, x-ray technicians, medical librarians, and other possessors of technical skills and knowledge who utilize special apparatus and methods are increasing in numbers and importance.

Industrial surveys in Minneapolis and St. Paul (364), and the analysis of census data in many other cities, including machine tool centers such as Worcester, first showed that the percentage of employed persons engaged in skilled and unskilled occupations was declining, while the proportion active in semi-skilled occupations was increasing slightly. This was due to the increasing automaticity of machines, which now perform not only heavy duties formerly taken care of by laborers, but many skilled tasks which machinists and others once performed. These machines require only semi-skilled operators under the direction of a few highly trained workers. Later studies show a proportionate increase in skilled workers, due to the rapid expansion of mechanization and the need for skilled design, installation, and maintenance men (372).

Effect on Workers. The effect of technology on those trained for established occupations can be described as elimination in some cases, upgrading in others, and downgrading in still others. Greater efficiency in production and in distribution may result, with greater sales and increased production; the displaced may therefore find their way back into employment instead of being eliminated altogether. But those who are displaced are generally not those who find the newly created opportunities, for these often develop in other localities, emerge slowly and unheralded, or require retraining about which the displaced worker does not know or which he cannot obtain. Many of the widely heralded new occupations are not really new; building and maintaining Diesel engines, for instance, requires no skills not already possessed by good gasoline engine mechanics, and jobs in plastics call for standard chemists and semi-skilled operatives.

The effects of technological change on the individual worker vary with several factors. One of these is the *rate of change.* Most telegraphers, for example, did not lose their jobs as a result of the introduction of teletyping;

instead, they were retained as telegraphers and replaced by teletypists only as they left for other jobs, retired, or died. Such a policy of not replacing workers possessing obsolescent skills is possible in certain noncompetitive situations—telegraph companies have a virtual monopoly. But it has not generally worked in competitive businesses and industries; when change has been rapid in these fields many workers have been displaced. The consequences have been minimized by the fact that technological change has not generally been rapid in fields in which it involved the displacement of workers. Automobiles won popular favor gradually, so that the cessation of the training of carriage makers, wheelwrights, and harness makers was the only effect on existing occupations. The introduction of semi-automatic and automatic machinery in manufacturing processes, on the other hand, has displaced workers in many industries, but not in great numbers at one time; it has usually taken place over a period of years, during which fewer skilled workers have been trained and fewer unskilled laborers hired, while those who were displaced by technology (and not by depression alone) have frequently found work in other occupations, often the semi-skilled (downgrading), or less often the highly skilled (upgrading).

Industrial Change. Most of the dramatic instances of displacement have been classifiable, not under the head of technological change, but of other types of industrial change. The decline of the cotton industry in New England, throwing thousands of workers out of their habitual occupations and closing old doors to new workers, can hardly be attributed to changes in the methods and machines of production. It must be explained by a number of other factors, among them the greater economies to be achieved by processing raw materials where they are produced and the availability of a large supply of cheaper labor in the South. A few instances in which those engaged in some industries and occupations have been clearly displaced by technological changes do certainly exist, as is made clear by the unemployment among coal miners in this country, where the use of oil and of water power to generate electricity has cut down the consumption of coal. In cases like this it seems that the effects of change are more drastic because they involve the substitution of the product of one geographic area for that of another, and a change in some consumer habits as well as in technology which makes the transfer of workers in the obsolescent to the nascent occupations difficult on grounds of geographic as well as occupational immobility. Mobility and versatility are psychological factors which limit the play of economic forces in vocational adjustment. In areas in which industrial and occupational changes have been studied, as in the state of Minnesota and the town of Williamsport, Pennsylvania (213, 299), and in which facilities were pro-

vided for retaining displaced workers for suitable newly developed occupations, the disrupting effect of technological change and of other economic factors on workers' lives has been minimized.

TASTE AND STYLE

Changes in tastes and styles affect the prosperity of different industries, and thus the fortunes of those employed in them. Those whose skills are not confined to an affected industry shift to other types of enterprise, if activity there is great enough to absorb them, with little effect on their occupational lives other than loss of seniority rights and temporary decrease in income. Those who cannot be absorbed by other industries in which their types of skills are used, or whose training qualifies them only for the obsolescent type of enterprise, are affected just as are the technologically unemployed. They are generally downgraded, into idleness or into lower level occupations for which they can qualify without retraining. Thus corset makers were for a time largely unemployed.

ACTS OF GOD

Another group of capricious, unpredictable influences on vocational adjustment are known as acts of God. Earthquakes, floods, storms, and other natural catastrophes may interrupt the economic activities of man and destroy the best-planned careers. The city of Antigua in Guatemala has for years been an empty ruin, the lives of its inhabitants having been disrupted by the violent earthquake of 1773; the flood of 1913 did not ruin Dayton, Ohio, as a city, nor did those in New England in 1955 ruin the communities which were hit, but the enterprises of many individual men were destroyed, and many careers were upset and redirected. In the last instance Federal aid often softened the blow. Catastrophes sometimes launch careers, as in the case of the peddler-banker Giannini in the San Francisco earthquake of 1906.

DEPLETION OF NATURAL RESOURCES

Less capricious than the above, because more directly the result of man's actions, is the depletion of natural resources. But the existence of a human agency in such economic changes does not lessen their catastrophic effects for the mass of persons involved in them, people so close to what is going on that they often fail to see that their actions and those of their predecessors must cause an eventual downfall. The complete cutting away of timber resources, the exhaustion of mineral ores, and the erosion of agricultural land have meant the death of more than one prosperous com-

munity, the destruction of many enterprises, and the disruption of the working lives of thousands of people. These have had to transfer to other enterprises, with frequent occupational downgrading, or to other communities where their skills and knowledge were still in demand.

PUBLIC POLICY

Human action in the form of public policy has economic effects as drastic and as sudden as those of style changes, acts of God, and depletion of resources.

Legislation. Legislation forbidding the employment of women and children in certain occupations or at certain hours may sweep entire groups out of occupations traditionally open to them and may open up new opportunities to other groups. In New York the passage of legislation forbidding the employment of waitresses after 8 P.M. reversed a tendency for women to take over such work, and made (or saved) more jobs for men. Some waiters who would have had to transfer to other types of work were able to continue in their occupations as a result of this legislation, and new men who would have worked elsewhere may have come into the field as replacements. A law requiring food handlers to wear hair nets may similarly have preserved the jobs and stabilized the careers of some who would have had cause to regret the popularity of bobbed hair! The "G.I. Bill," the vocational rehabilitation acts, and Federal scholarship plans such as that for the children of veterans killed in action or dead of service-connected disabilities, have the effect of facilitating upward mobility, thus changing careers.

Tariffs. The erection or removal of trade barriers similarly creates or wipes out industries and disrupts vocational life; thus the British Parliament in colonial days temporarily killed a nascent iron industry in Pennsylvania and fostered now defunct rice and indigo planting in South Carolina and Georgia.

War. War is perhaps the extreme instance of what public policy can do to economic life and vocational adjustment. "Guns instead of butter" in Nazi Germany and Soviet Russia, the emphasis on the metal trades and "defense jobs" in America, the drafting of thousands of young men throughout the world—all of these meant changes in the vocational plans, training, experience, and adjustment of young and old. As a result of World War I, Hitler, the paper hanger, became a political agitator and a dictator; Paderewski, the musician, became temporarily a chief of state; Ayres, a psychologist, became a bank official and economist; John Doe, a young businessman who became an aviator in the First World War and could not settle down to business after it was all over, was not happy until he got back into flying

again as a commercial pilot. And some come back from the wars able to fit into vocational life only after prolonged treatment and rehabilitation.

UNIONIZATION

Equally the result of human action, but more directly aimed at affecting vocational life, are occupational barriers created by trade unions and professional organizations. The objectives of these barriers to entry into an occupation are complex and frequently disguised. They include the socially desirable intention of raising the standards of competence of those engaged in the work, the constructive desire to keep the numbers of those in the occupation from swelling so as to create unemployment in that field, and the selfish but human aim of so restricting the size of the occupational group as to increase their financial rewards beyond what society would otherwise pay for their services. During the depression of the 1930's the number of qualified workers in some skilled trades, those of machinist and toolmaker in particular, declined. With limited employment opportunities available, training opportunities were curtailed. So few men entered them that real shortages were felt when the heavy industries became more active again in the 1940's. Medical schools have so raised their standards that the average physician today is more competent than his colleague of a generation ago, but at the same time the number of physicians has been kept so small that the medical profession is the best-paid professional group (376: Vol. II, Table 129). This policy operates to make entry into the occupation more difficult, but success, once one is in the group, more certain. The professional organization or trade-union which keeps out newcomers by erecting barriers also attempts to assist its members to find work, to keep their jobs, and often to improve their skill and knowledge while on the job.

Those who fail to fit in with the demands of their occupational groups often find, however, that the group can work against them as well as for them. Thus physicians who have engaged in group practice, sometimes construed as foreshadowing socialized medicine, have not infrequently been censured by their professional organizations. Trade-union members may have their bodies and their lives blasted by going against the wishes of the majority. And any member of any professional organization may find his career altered by the policies adopted by his fellows: witness those who lose their jobs in unsuccessful strikes, who get raises and promotions because of union-won concessions, or who find their social role becoming less important because their group, having failed to adapt itself to new conditions, has lost an opportunity to serve society which another group has welcomed.

ORGANIZATION OF BUSINESS ENTERPRISE

Ownership and Management. Changes in the types of business organizations bring with them changes in occupations. The increasingly important role played by corporate enterprise and large accumulations of capital during the late nineteenth and early twentieth centuries has meant less opportunity for potential small owners to get a start in business and industry, and many private owners have been forced out of business by this larger-scale competition. Census figures show that the proportion of workers in the proprietary classification has been steadily declining for some time. But, as fewer persons have a chance to own, more managerial, technical, professional, and clerical workers are needed to run the large-scale enterprises and, as Adams (3) and Warner and Abegglen show (350), opportunities in management become more generally available. A new managerial and professional middle class is becoming numerically and perhaps in other ways more important in America (219).

Security and Advancement. Other results have come from the increase in large-scale enterprise, in which we must include not only corporations but government agencies. One not infrequently hears complaints concerning the lack of the personal element in employer-employee relationships when owners are not present in the form of proprietary managers. Warner has documented these in the shoe industry (351). When public or corporation policy seems to necessitate the dismissal, transfer, or reclassification of employees, employed executives are often forced to carry out the policy regardless of personal feelings in the matter, whereas in smaller, more personally managed concerns employers have been known to allow the welfare of individual employees to prevail over the immediate welfare of the firm. Recognition of ability sometimes comes sooner in smaller, privately owned companies where junior employees are in more direct contact with responsible executives.

This loss of the personal element in modern business organization is often bemoaned. Yet many large concerns and government agencies have developed scientific personnel methods which do a great deal to give management an adequate understanding of its employees. As things are, it is still true that something valuable is lost when those in whom ultimate responsibility lies lose contact with their employees. In these conditions some persons with abilities and personality traits which enable them to take advantage of a disturbed situation rise more rapidly and further than other persons who may be, perhaps because they lack those traits, better employees. A true merit system cannot operate unless an adequate attempt is made to locate and utilize ability.

SOCIOECONOMIC STATUS

One fundamental economic factor in vocational adjustment is the individual's own socioeconomic status, both as determined by his father's occupational level and by his own. It would not be accurate, of course, to assume that occupation is the sole determinant of socioeconomic status. In some societies family, religion, and other factors have been the principal determinants, and we have seen, in Chapter 2, that other factors enter into status judgments in America. But ample objective evidence, discussed in that chapter, has shown that occupation is the best single index of status.

Inheritance. This in itself would not be relevant were it not that there is ample evidence to show that the economic status or occupational level of one generation tends to remain that of the previous generation (78, 217). The children of unskilled workers tend on the whole to enter unskilled occupations, although some do rise in the scale; the children of business and professional men tend to enter business and the professions, although some fall in the scale. This is due to several factors. One of these is that mental ability, even though modified by environment, is largely an inherited characteristic (229, 341). As the more intelligent members of society have a tendency to rise in the occupational and socioeconomic scale, the children of the more intelligent tend both to be born high in the occupational scale and intelligent enough to maintain their status there. Similarly, the children of the less intelligent both tend to be born low in the scale and to be not mentally equipped to rise appreciably. But this, it should be remembered, is despite the fact that, since the lower ranks of society are by far the most numerous, they are society's greatest single source of intellectually gifted individuals. Those who are born high in the scale tend to be more fortunate not only in biological but in social inheritance than those born lower on the ladder. Their environment is generally richer intellectually and emotionally, their achievement motivation is superior, their education is likely to be better and more complete, they are more apt to have contacts that will help them get started and get ahead, they have more capital to assist them in the process, and they receive higher wages and salaries. Studies of motivation and of work satisfactions, already discussed, make some of these facts clear. The survey made by Bell (23) also provided some interesting evidence.

Effect on Vocational Success. Parental socioeconomic status may be thought of as one economic factor which brings in its train a number of others affecting early vocational adjustments, as various studies already discussed (78, 151, 217) have shown. Each of these latter may be significant as a result of this first factor, or it may operate for other reasons. Thus some

persons, in spite of being economically handicapped, obtain a good education; to make this available to all has in fact been one objective in our democratic system. The amount and quality of *education* obtained may also be considered, for this reason, as a socioeconomic factor that affects both the type of vocation entered and success in it, or it may be considered a psychological factor. The fact that high school graduates earn, on the average, fifty per cent more than those who drop out of school no doubt reflects in part native differences in ability, those who graduated from high school being on the whole more able. But it is also true that one reason why the graduates obtained better paying jobs was that they had the common prerequisite, a high school education, which itself was often partly due to their having parents who were better able to keep them in school.

Knowing people whose friendship and knowledge can be helpful is of prime importance in vocational adjustment, for we have seen that it is through contacts that the largest percentage of jobs are found. The person most likely to obtain employment in an appropriate field is acquainted with people who know what is going on, can tell him when and where openings are likely to develop, can introduce him to those who employ, and whose recommendations are likely to be given some weight. The use of contacts may involve not getting a job or a promotion for someone who could not otherwise compete for it but simply bringing together potential employers and employees by persons whose judgment means something to each. Contacts may be used, in seeking jobs, simply to get a hearing. They may be used, in making a success of a job, merely to broaden the scope of one's activities. This is not to imply that influence is never misused, but rather to point out its numerous legitimate uses. These are considered together with economic factors in vocational adjustment because they are generally the result of socioeconomic status as determined by the parental occupation and one's own education. They are also, but less often in the early stages of a career, the result of personal traits and achievement.

Access to capital is an economic factor that is largely controlled, early in life, by the parental occupational level and by one's own education, as these determine the inheritance of capital and ability to obtain loans. In maturity, personal socioeconomic level enters into the picture as a factor establishing one's rating as a risk for loans and the amount one is able to save from regular income for investment. Here, as in all factors related to socioeconomic status, it is a case of those who are well endowed to begin with being more favored as time goes on. This should not be taken as implying that there are no exceptions, for there are many; but these are due to the operation of other economic or psychological factors which minimize socioeconomic

status. The aspects of socioeconomic status which have been dealt with concern largely the early stages of vocational development. Once a start has been made, the individual has done something to establish his own socioeconomic status, either maintaining that conferred upon him by his parents or changing it as a result of psychological and economic factors. Then other aspects of vocational adjustment begin to be important and, as might be expected, his own socioeconomic status plays a part.

Effects on Vocational Satisfaction. The occupational scale which has here been used classifies vocations according to a number of criteria, all of which (54, 59) tend to agree with each other. The occupations which rank high in the scale are those which generally rank high in public esteem, require considerable general ability, necessitate prolonged and expensive training, and pay well. Those which rank low in the scale generally rank low in each of the factors just listed, despite considerable variation within groups. It would therefore be logical to assume that people who have succeeded in establishing themselves in the higher occupational groups would tend to be better satisfied with their jobs than those who have found work only at lower levels, for they have greater *incomes* and more *prestige.* Again we assume that psychological factors are equal, but social pressure makes for a tendency to aim too high in relation to ability, and lack of ability to do one's work makes for dissatisfaction with it. Despite the operation of such qualifying factors, however, more people employed in the higher occupational levels are satisfied with their work than at the lower levels (152, 153, 306). This relationship is not so consistent as one might expect, for skilled workers are more likely to be satisfied with their work than are clerical and commercial workers who rank higher in the scale.

Prestige and income are not the only factors which make for greater satisfaction in the higher occupational levels. The *conditions of work* are generally more attractive, the working hours are pleasanter, the work is more regular, there is more freedom. These are probably also the reasons why greater prestige is attached to such occupations. Despite the importance of socioeconomic status in job satisfaction some investigations have brought out the fact that vocational adjustment in the broader sense is related to status in one's own occupational group. It is not only important, in other words, to be as high as conditions will allow one to be in the scale; to be really satisfied one must also rank high in the group in which one works, be respected by one's fellows, and valued both by superiors and inferiors. This is not an economic but a psychological factor which limits to some extent the effect of the socioeconomic status.

CONCLUSIONS

The general effect of socioeconomic factors is, we have seen, to cause the children of those with less education and lower incomes to obtain less education than children better situated. This in turn tends to result in their entering low level occupations where they earn small incomes and are able to give their children no better opportunities than they themselves had received. This works not only to keep many of the lowly placed down, but to keep many of the highly placed up. We have, in fact, a somewhat stratified society rather than full social mobility and equal opportunity. If we now bring into the picture the facts concerning the inheritance of scholastic ability and of other desirable psychological traits, it becomes clear that, in spite of the tendency for like to breed like, and in spite of a relatively high degree of occupational and social mobility combined with an open educational system, there are many exceptional persons who have ability to rise in the occupational scale but who are unable to do so, and many who should fall to lower levels but may not do so, for social and economic reasons. The end result for these individuals is frustration and maladjustment; for society, the result is wasted manpower and misdirected effort.

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DISABILITIES IN VOCATIONAL DEVELOPMENT

Awareness of the impact of physical, intellectual, and emotional disabilities upon careers is by no means new. Vocational rehabilitation work with the *physically* handicapped was launched by the Federal government, through the States, in 1920 and extended to the mentally and emotionally handicapped in 1943. The Institute for the Crippled and Disabled, in New York City, was founded in substantially its present form in 1917 and became a comprehensive rehabilitation center. Anderson completed a doctoral dissertation on the careers of the disabled in 1932 (9). Burr studied the employment of the *mentally* handicapped in 1924 (52). But general awareness of the impact of *social* disability came somewhat later, with the studies of the employment status of youth and of the effects of minority group status on Negroes conducted by the American Youth Commission late in the 1930's (23, 253, 325), with work on the employment of older workers (248, 380) and of displaced persons during the 1930's and particularly the 1940's. The great development of the Veterans Administration's services for the rehabilitation of emotionally and physically disabled servicemen during and after World War II (227, 245, 382), combined with manpower shortages, resulted in a growing interest in vocational rehabilitation. This in turn led to the great expansion of civilian rehabilitation services in public and private agencies in the 1950's under the sponsorship of the Office of Vocational Rehabilitation (218). The emotionally disturbed, the cerebral palsied, the blind, the mentally retarded, and other disability groups now receive special attention from voluntary organizations.

THE NATURE OF DISABILITY

Personal or Social? The mere listing of types of disabilities raises a question concerning their nature. Physical disabilities, intellectual disabilities, emotional disabilities, and social disabilities seem like strange bedfellows. Amputations and cardiac conditions, mental defect and brain damage, schizophrenia and depression, youth and old age, womanhood, class and color, Jewishness, anti-communism, Roman Catholicism—one is tempted to go on and add Protestanism, Greek Orthodoxy, and

agnosticism! What condition is not a disability, a handicap, under some circumstances? For some positions, some occupations, too high an intelligence level, too high a socioeconomic status, too much education, masculinity, being white, is as much a handicap as are the obverse conditions in competing for certain other positions, other occupations.

Disability and handicap are, clearly, in varying degrees *intrinsic,* that is, both inherent, essential attributes of the conditions with which they are associated, and *extrinsic,* that is, social or nonessential attributes of the status or condition with which they are associated—handicaps erected by social attitudes, biases, or requirements. A double amputee is clearly and really disabled in so far as the occupation of airline pilot is concerned; but not so a woman, whose handicap in this respect at least is strictly one of social attitudes. An Ivy League college graduate is clearly and really handicapped in so far as employment as a fireman is concerned, for his mental ability and social status both militate against his being satisfied to function as a fireman long enough to win advancement to a fire department position which might challenge his ability and perhaps satisfy his status needs. But it is only bias which makes it difficult for a Negro of average intelligence and education to get an appointment to the fire departments of many cities and towns, Northern as well as Southern. And in many instances personal and social, real and imposed, handicaps and disabilities combine to increase the effects of statuses such as tuberculosis, amputation, and schizophrenia.

Precareer or Midcareer. A disability or handicap may be one which the individual has had since birth or childhood, before embarking on a career; or it may be one which he has acquired later in life, after having begun work and a career. In the former case he has lived with his handicap for some time, and has to some extent, even if inadequately, incorporated it into his self-concept. It does not have the effect of disrupting his career, although it may affect his orientation and planning, and particularly his ability to plan, for his dependency experiences may make him fear to expose himself to competition or to chances of failure. In the latter type of case, the effect of the newly acquired disability or handicap is disorganizing, for it must be incorporated into a modified self-concept, and the individual must, through reality testing, find a role in which he can meet social expectations and satisfy his own aspirations. The counseling and rehabilitation processes may differ considerably in the two instances, particularly in the help given in developing a self-concept.

It is not just the chance illness or accident that imposes the disruptive type of handicap. The accidents of war and politics can impose social handicaps which are just as serious as the personal handicaps of physique. A

defeated, disrupted nation may vent its frustrated feelings on a minority group, as did Hitler's Germany, making being a Jew a handicap. The displaced person who had a superior legal education in prewar Poland finds his professional status and verbal knowledge worse than useless in America, for they make it difficult for him to start at the bottom in some other line of work. Similarly, his counterpart who remained in Poland despite former anti-Communist activity finds himself debarred from all intellectual employment and forced to rehabilitate himself in some semi-skilled or skilled occupation.

THE EFFECTS OF DISABILITIES

A disability or handicap may be seen as an insuperable barrier or as a hurdle which may be overcome. When the barrier seems likely to remain insuperable the objective must be abandoned and a substitute found, necessitating retraining in the case of midcareer disabilities. When it is more likely to be a hurdle, the question appears to be one of the feasibility of overcoming the hurdle, as contrasted with the prospects and costs of substitutes and of retraining.

This is a point at which biases often play a part, for what one client or counselor sees as a barrier, another may see as a hurdle. What one person perceives as a difficult hurdle may be seen by another as something of little consequence, depending upon personality structures and needs, as Block (37) has suggested. The attitudes of clients and counselors, and of employers, are vital, sometimes to be given considerable weight and sometimes to be viewed as subject to modification.

Here, the results of a number of studies of the employment of the handicapped are most relevant. Anderson (9) found that crippled adults were employed in a great variety of occupations, some of them rather unexpected for the physically handicapped. Burr (52), Charles (65), and others have found that mental defectives held a surprising range and variety of jobs. While it is no doubt true that the occupations of patrolman, pilot, and logger are not for persons with leg amputations or paraplegia, and that mental defectives cannot handle these occupations, for the great majority of occupations handicaps have the real effect of erecting hurdles, not of imposing barriers. Thus a blind student who was discouraged by his instructors from doing graduate work in mathematics, at which he excelled in a highly selective college despite problems of visualizing, went on successfully with advanced work in social psychology, in which his blindness would seem to be as much of a handicap because of the need to see subjects and data, and found satisfactory employment in the field. Another adult with a spinal

injury went on teaching successfully in a wheel chair. Such disabilities are handicaps in any situation. The solution is generally, although not always, to find ways of surmounting the hurdle.

Precareer handicaps have been shown to have a detrimental effect on the self-concept, for the handicapped person is made by social reactions, as Sutherland has shown of Negroes (325), to feel somewhat different from, inferior to, and unacceptable among normal persons. Sex imposes a special role on women, limiting their career motivation (225, 339). Vocational development for such individuals is therefore particularly difficult, for social realities must be separated from personal, and ways of dealing with each of these must be developed. Self-acceptance as a handicapped person with usable vocational potentials develops with the recognition of reality and with increasing skill in meeting it, and a realistic self-concept makes the handicapped person more acceptable to his fellows. This in turn has the effect of making him more acceptable to himself. With these developments it becomes easier to clarify vocational objectives, and to make and carry out plans for their attainment.

The experience of the midcareer disabled is different early in his history, for he has up to that point been a normally functioning and effective person. The disability has a disorganizing effect, upsetting the equilibrium of his adjustment and requiring the assimilation of new factors into his self-concept. As a convalescent, however, his experiences begin to resemble those of the precareer disabled, to whom he may once have felt superior but with whom he must now be identified and develop some identification. His main problem is to develop self-acceptance, as a new, handicapped, but worthwhile person, and to recognize the feasibility of overcoming hurdles in his previous occupation or, if the barriers are insuperable, in others which may be appropriate for the new constellation of vocational assets which he may mobilize through rehabilitation.

GUIDANCE

Although the organization of this treatise would make it more logical to consider the implications of what has been said for guiding the vocational development of the handicapped in the final chapter, it seems wise to depart from this pattern in this instance. No attempt will be made here to survey methods of counseling the handicapped, for this book is a treatise of vocational development and, only by implication, of guidance or counseling. Hamilton has provided a text (136) on this subject. We are concerned at present only with the implications of our understanding of the vocational development of the handicapped for vocational guidance.

Since vocational development is the development and implementation of a self-concept, it is clear that in the counseling of the handicapped assisting in the development of a realistic self-concept is a basic task. How this is done must, of course, vary with the handicap. In the case of mental defectives and psychotics it will not, obviously, be through therapeutic counseling of a verbal type, which may well be appropriate in the case of a displaced person, an amputee, or an older man.

Assisting in testing the adequacy of the self-concept is also a function of vocational counseling with the handicapped. This may be done through occupational therapy, employment in hospital industries, or transitional or temporary employment in a sheltered workshop; at a later stage of development it may be done through selective placement with an understanding and accepting employer. One effect of such reality testing, if well done, is the strengthening of the client's ego. Role playing in the hospital or rehabilitation center, and counseling in the guidance bureau, may also have these effects with clients of average or superior mental ability.

Knowledge of career patterns can be of use here also. Seeing the vocational development of the patient or client against the career pattern of others with similar characteristics helps to understand his potential, both on the part of the counselor or the client, and on the part of the client's family and employer. Understanding the role of dynamic factors such as intelligence, special aptitudes, interests, values, personality, social status, and economic conditions also contributes, for these factors may be more important than the handicap, or they may modify its importance.

Finally, understanding the life stage of the patient or client is important. The recuperative forces are likely to be stronger during the exploratory and establishment stages than during the maintenance or decline stages. They make modifying the self-coneept and overcoming hurdles easier early in a career than later, while making the acceptance of a lowered self-ideal somewhat easier later in life. Rehabilitation is best related to the life stage of the client, taking into account the realities of his self and of his situation. It is an exceptional man who, blinded in his forties, or tortured and deported in his fifties, retrains for a profession different from his previous employment. Achievement motivation must be particularly strong to get him over the hurdles as a student and as a neophyte for a second time. But it is a waste of human resources to let him settle for making brooms if he has the ability and the motivation to perform at a higher level, after he has recovered from the initial shock of a sudden, psychologically traumatizing, disability.

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CHANCE: THE UNKNOWN OR UNCONTROLLED FACTORS

Sociological and Psychological Concepts of Chance. Those who approach the problems of vocational development and adjustment from an economic or sociological standpoint often stress the importance of chance or accident factors (217, 256). The term *accident theory* occurs in their writing, and accident is considered an important determinant of vocational development. Thus Miller and Form write: "Chance experiences undoubtedly explain the process by which most occupational choices are made" (217:660), and Reynolds (256:40) describes early job choices as haphazard. Palmer (257:134–136), however, found that "accidents" explained the careers of only about one-fourth of the labor force, largely unskilled and semi-skilled workers. Ginzberg and associates introduce criticisms of accident theory with the statement that "The first, and most generally accepted, theory of occupational choice holds that individuals make decisions about the future 'accidentally . . .'" (126:18).

Those who write from a psychological standpoint, however, and this includes most educationally trained school guidance people, tend to eschew the concepts of accident and chance and to deal instead with probabilities. Perhaps one reason is that, interested in the understanding and control of human behavior, they tend to concentrate on prediction, on finding out and using what can be known rather than playing up the unknown. More important still, the reasons why sociologically and psychologically oriented writers on vocational choice differ in their emphasis arise from their definitions and concepts of chance.

Miller and Form, for example, define chance as those experiences "which are unplanned so far as the individuals themselves are concerned" (217: 660–661). This means that, for example, parental socioeconomic status, intelligence, and health are conceived of as chance factors by these sociologists. On the other hand, Horst, like most psychologists, writes of *contingency* factors rather than of *chance*, and these are defined as "those personal and situational factors which affect level of performance but for which the probability of subsequent presence or absence is not known at the time the prediction is made" (154:54). He goes on: "Even though it is not known in

advance whether certain conditions will arise, the direction of their influence in the event that they do arise can be established . . . three ways of dealing with such factors are discussed: (1) the criterion score may be adjusted for the contingency; (2) the contingency factor may be treated as one of the predictive elements; or (3) the contingency factor may be predicted."

Knowledge and Control. It seems clear that what Miller and Form term chance includes more than what Horst calls contingency factors. In the psychologist's thinking, socioeconomic status and intelligence are known factors. It does not matter whether or not they are originally within the control of the individual, for while he cannot change his parental status or his intelligence, he can take these into account in his planning, and so can the psychologist in setting up a regression equation. While the sociologist is concerned that the individual's initial socioeconomic status is beyond his control, the psychologist recognizes that certain kinds of outcomes can reliably be anticipated from a given social status, and the educator plans to take advantage of these outcomes when they are likely to be helpful or to counteract them when they are likely to be detrimental. *The statistician can predict the effect of social status, and the counselor can move to defeat the prediction.* The individual cannot help being born in a Class IV family, but he can recognize the obstacles to a professional career imposed by this fact, and he can take steps to overcome them if he aspires to such a career and has other qualifications.

Health, on the other hand, might be viewed differently. Certain kinds of illnesses—cancer, for instance—do seem to be largely a matter of chance in our present state of knowledge. But contracting tuberculosis has for some time not been fortuitous. Knowing how it is contracted, it can generally be avoided. Being hit by a car or having a brick fall on one's head from the roof of a building do appear to be chance factors in the true sense of the word. But even these contingencies can be predicted, in the sense that their incidence in the general population and in certain classes of population are known. That is why Horst suggests that they can be taken into account. Similarly, seasonal and cyclical unemployment, technological change, fire and flood, war, and the death of business partners can be viewed as chance factors, for to greater or lesser degree they are beyond the control of the individual (the sociologist's definition) and the probability of their presence or absence is not known at the time the prediction is made (the psychologist's definition). But in their case, too, incidence in the general population or in some appropriate subgroup thereof is known (as in the case of illness, disability, seasonal change or fire), or the situation can be studied in order to ascertain the prospects of that factor operating (e.g., chances of war,

conditions favorable for flash floods or hurricanes). Given sufficient knowledge, there is no such thing as chance.

In one discussion of the role of chance in vocational development the career of the artist Whistler was used as an illustration, although not as proof. His becoming an artist was, the argument runs, the result of chance, for he was a cadet at the United States Military Academy, failed a science examination, and left West Point to become an artist. His entering art is therefore attributed to the chance of failing a science examination. But as Ginzberg and associates point out (126:19), the example was not sufficiently analyzed. One must proceed to inquire as to why Whistler failed in science. Was it due to lack of ability, industry, or interest? These are not chance factors, for they could have been known. Failure could have been predicted, or Whistler might have applied himself more effectively to overcome his handicap. Having failed in science, why did Whistler become an artist? Many others have failed science examinations at West Point without becoming artists. Whistler must have had some artistic talent or interest, which could have been known and used as a basis for predicting his choice of and success in this career.

It is true that being exposed to a particular experience is often a matter of chance. But everyone is exposed to a great variety of experiences, today more than ever. Some persons respond to certain of these, but not to others; and other persons fail to respond to the former experiences while getting something from the latter. Whistler's exposure to art led him into that field. Roe's biologist, discussed in a preceding chapter, exposed to biological sciences through the persons and careers of an uncle and a cousin, was led into that field. But others have had experiences with art and with biology without ever doing anything about them. There are characteristics in the individual which incline him to react positively to some experiences, neutrally to others, and negatively to still others. Knowing these characteristics, one can predict with some degree of accuracy the use which will be made of the experiences to which chance exposes. What is equally important is that one can predict the nature of the experiences which will be sought out and utilized (304).

Emphasis on Situational Factors. Perhaps the main virtue of accident theory is that it emphasizes the fact that factors external to the individual need to be taken into account. There are a great variety of these situational factors, as we have seen. But they are not beyond control, because one can know what they are and how they operate, and one can do something about their impact. They are generally unplanned by society, and too often un-

known to the individual, but they can become known and they can be planned.

For example, educators know that adolescents are exposed to a limited variety of occupations. This is because of the complexity of industry and business, because work is carried on behind high walls and closed doors, and because of the somewhat stratified nature of our society. Chance, then, limits the exposure of the youth to the fields of work in which his parents, his parents' friends, his neighbors, and his teachers engage, plus a few other fields which are publicized in print and in picture. Knowing this fact, however, it is possible to predict choice on the basis of such exposure. It is possible to increase the range of choice by providing experiences, both in school and out, which expose the student to other fields of work. And it is possible to widen the range of his adult friendships so that he may have more opportunity to find appropriate role models.

For the individual, too, the implications are clear. He must not only know himself, his abilities, needs, values, and interests, but he must also know the world in which he is developing and in which his career will unfold. He must be aware of economic conditions and trends which may modify his career, he must be aware of social forces which may affect his work, he must take into account the accidents of illness, of public events, and of nature which may occur to him or to his workplace, and he must in so far as possible plan for these contingencies. Just as the prudent individual takes out life insurance for himself and fire insurance for his house, so the prudent person takes various kinds of precautions for his career and for his enterprises.

An Illustrative Case. In closing this discussion of chance and accidents, it may help to use another case for illustrative purposes (disguised to make it unidentifiable but still true to life). James Robinson was a graduate student sometime after World War II. All three of the specialties which interested him most in his field were expanding with good opportunities open to doctoral graduates, but all these fields were well established and developed; in all of them there were a number of outstanding men and women occupying key university and institutional positions; in all of them there were recognized textbooks. Unusually ambitious and able, Robinson aspired to be an outstanding person himself. With the familiar specialties which interested him most seemingly well staffed, he concluded that to achieve real stature himself in the least possible time he should enter a newer field which was only just developing, a vacuum area, one in which an able individual would stand out more readily because it was as yet only partly staffed.

Robinson chose for special emphasis an emerging specialty close to those in which he had been working as a student, and obtained the best available special training in it. While doing this he gave some thought to the question of where he would like to live and work, and selected three outstanding institutions as favorable places for carrying on the kind of work he wished to do. He made a point of meeting some of the members of the staffs of those institutions at conventions, corresponded with some of them about papers and books of theirs which interested him, sent them reprints of research he himself carried out in the situation in which he was employed. Standing idly in a hotel lobby during a convention three years after he had finished his doctorate, seeing and being seen, he recognized the head of the department in one of the universities in which he was interested. He made a point of introducing himself and referring to their correspondence. They chatted for a few minutes and parted. Some months later he received a letter from this department head inquiring as to whether he would be interested in joining the faculty at that university, to develop a graduate training program and conduct research in his special area of interest. After the usual negotiations he accepted. He is now a national figure in that field, partly by virtue of his work and partly by virtue of the conspicuous position which he occupies.

Boom years, a growing profession, a new and rapidly developing specialty, and an encounter at a convention—these may look like chance factors, but they were all understood by Robinson and incorporated into his plans. He made a point of being ready, in the right place, at the right time. He put himself in chance's way and took full advantage of the opportunity which developed. Some might say he was calculating, an "operator"; others might consider him a planful and insightful person. His colleagues like and respect him. Such factors as those which he manipulated are matters of chance only when ignorance or neglect makes them that.

21

THE SYNTHESIZING PROCESS

In the chapters which constitute the bulk of this Part of the book, we have examined the roles played by each of a number of types of factors, ranging from aptitudes to chance. After pointing out the fallacies which can result from concern with a single factor or type of factor, we proceeded to deal with them one at a time. This was done in order that the nature and operation of each might be better understood through giving our attention exclusively to it. It now becomes important to consider how these various factors act together to determine vocational development.

METHODS OF ANALYZING THE INTERPLAY OF FACTORS

In Chapter 12, introducing this Part, the factorial approach was described, and trait theory and the actuarial method were contrasted with life pattern theory and the thematic-extrapolative method. These represent two ways of examining and evaluating personal data in order to understand, e.g., to predict, vocational development. The former method is that which has been typically used with many of the data which have been discussed in these chapters.

The Actuarial Method. In its most highly developed form, the actuarial method involves computing correlations between each of the traits or factors and the criterion, e.g., occupational success, and combining the various factors in a regression equation with weights assigned on the basis of the degree of relationship between factor and criterion. In this way, the contribution of each factor to success is ascertained, and a prediction is made on the basis of the best combination of these factors.

The method of combining factors, however, has the disadvantage of treating each factor as though it were static. This is normally appropriate for some of them. Intelligence, for example, is not likely to change appreciably after early adolescence. But it is not at all appropriate for others. Social status not infrequently changes, needs are modified by experience, and attitudes are even more susceptible to change. One trait or factor modifies another, in a continuing interaction of factors. Unless ways are found by means of which to quantify these very changes, as in developing a measure

of social mobility, they are left out of the regression equation. Since the development of such measures of interaction and change is still in its infancy, and has not even been tried for most of the factors with which we are here concerned, it is obvious that the actuarial method does not take into account many of the elements which should be considered in forecasting or guiding vocational development.

The Thematic-extrapolative Method. It was suggested in Chapter 12 that the thematic-extrapolative method offers promise as a dynamic way of evaluating and combining data for the understanding of vocational development. This is because the identification of themes in the life history of a person gives one clues as to the nature of the changes which are taking place in his personality structure and social situation. Noting these changes or trends in needs, values, achievement, etc., one can project them into the future, extrapolate them, in order to predict behavior patterns which will emerge. The recurrent manifestation of a need, a value, an interest, or a type of achievement in the history of a person can give one more confidence in its significance; changes in the frequency and strength of its manifestation can also yield clues as to its relative diagnostic and prognostic value. The interaction of factors can, in this process of extrapolation, be taken into account.

Despite its apparent promise, the thematic-extrapolative method has not so far been demonstrated to give better results than the actuarial. The method is one form of the clinical method, and, as Meehl's review (215) has shown, the clinical method as now used is not superior to the statistical. But, since no adequate scientific basis has yet been developed for the thematic-extrapolative method, and since one is available for the actuarial method, this failure to prove the former superior has little ultimate significance. The method is of interest here because it may, at some future time, provide a more adequate method of combining data on vocational development than does the actuarial method as we now know it, and because when this happens it may add to our understanding of the interaction of the factors determining vocational choice, success, and satisfaction.

DEVELOPMENT: A PROCESS

It need hardly be said that vocational development is a process. It would be unnecessary to say it at all were it not that the concept of development has not, until recent years, been applied to the study of vocational choice and adjustment. Despite statements in the earlier literature of vocational guidance to the effect that vocational choice is a process, and

that this process is continuous (4; 176:230–232; 316), the continued use of the term *choice* connoted an event. The impression left was that at some moment in his life an individual chooses an occupation, after which he prepares for, enters, and then adjusts to it. Thus Ginzberg and associates (126) thought it necessary to report, as one of their major findings, the fact that "occupational choice is a developmental process which typically takes place over a period of some ten years." As has been pointed out elsewhere (316), this is nothing new in the theory of vocational guidance, but it is a fact which has been neglected in much of the discussion of vocational guidance practice, and in much of the actual practice of vocational counseling. Ginzberg has fallen into the very same trap of discontinuity by distinguishing between choice and adjustment. Mathewson's treatment of guidance as developmental (212) is unusual in this respect. So is Dysinger's (95), in suggesting that "The guidance movement needs a word parallel to the word 'socialization' in social development, to express the vocational implications of maturation . . . vocational planning is a process, not a moment. There are developmental steps, and vocational readiness is as valid a concept as reading readiness. Timing is of the essence . . ." As an increasing number of writers on the subject (23, 154, 171, 316, 323) have pointed out, the use of the term *vocational development* avoids giving this impression of instantaneousness, and points up the unfolding, developmental nature of the vocational choice and adjustment process.

DEVELOPMENT INVOLVES INTERACTION

The fact that vocational development is a process is important in this context because development implies interaction, and because interaction can best be understood in the developmental process. The individual is born with certain neural and endocrine tendencies or potentialities. These may be thought of as his personal resources. He finds himself in an environment which contains tendencies or potentialities which are independent of the individual, but with which the developing individual interacts. These may be considered cultural resources. As the individual makes use of the resources in his environment, and brings his own tendencies and potentialities to bear on them in the performance of the developmental tasks which constitute social expectation, interaction takes place. This interaction is thus a process of socialization.

Strong has explained the development of vocational interests in terms of the interaction of the individual and his environment: "An interest is an expression of one's reaction to his environment. The reaction of liking-

disliking is a resultant of satisfactory or unsatisfactory dealing with the object. Different people react differently to the same object. The different reactions, we suspect, arise because the individuals are different to start with" (303:682).

This kind of interaction between individual and environment might be illustrated by two boys, each with considerable fine finger dexterity, one growing up in a Swiss mountain village family, the other in a middle class city family. One of the activities which the former boy observes in his home is the assembly of watchworks during the winter months. His need to belong, to gain status, to master his environment, lead him to want to work with other family members in this assembly work; his manual dexterity enables him rapidly to acquire a high degree of skill. This in turn brings praise and satisfaction, and this boy aspires to become a watchmaker. His counterpart in the city, however, being exposed to middle class urban influences, would be more likely to develop artistic or scientific boyhood hobbies, and to aspire to an occupation in one of these fields depending upon the degrees of emotionality and of intellectualization which characterize him and the rewards which his family, his peers, and his school give for achievement in the respective fields. In the first case, aptitude-dexterity plus resource-watchmaking plus needs-belongingness-status-mastery equaled aspiriation-watchmaker. In the second case, aptitude-dexterity plus resources-art-science plus needs-intellectualization-status-mastery might equal aspiration-engineer.

In these examples, we have seen 1) the boys' aptitudes and needs interacting with the resources and demands of the environment, and, 2) the boys' aptitudes and needs interacting with each other. Interaction is therefore both intra-individual, stimulated by environmental pressures, and individual-environmental, complicated by simultaneous interaction in the individual and in the environment. When intra-individual interaction takes place or intrudes upon consciousness, it is synonymous with self-exploration. When individual-environmental interaction takes place on the conscious level, it involves reality testing. In both instances the self-concept is developing. But interaction is not always at the conscious level. Much of it takes place without verbalization, without awareness on the part of the experiencing individual of what is taking place. Thus, in the case of the boy aspiring to be a watchmaker, awareness of his emerging self-concept as watchmaker would probably not take place until late in the process, after which he might rationalize his aspirations on the grounds that he uses his hands well and that it is a field in which good opportunities are open to him.

INTERACTION RESULTS IN SYNTHESIS OR COMPROMISE

According to Ginzberg's formulation (126), fantasy needs dominate the development of vocational preference in pre-adolescence, after which interests, then aptitudes, then values, and finally external reality factors come into play and become dominant. The actual choice of an occupation, i.e., the implemented preference, is in this theory the result of a compromise between these various factors. This formulation is helpful as far as it goes, but it fails in two important respects. First, it does not describe how the compromise takes place. Secondly, it recognizes the action and interaction of each of these types of factors relatively late in the development of the individual, and leaves the impression that, once a late-developing factor comes into play, those which have played a part earlier are no longer of much consequence.

It seems important to describe more clearly how the compromise between needs, interests, aptitudes, values, and external realities takes place. If what we have written so far is correct, when wholesome development takes place the process is not so much one of *compromise* as one of *synthesis*. The term compromise seems more appropriate when the reality-testing process begins later than it should, when the self has not been adequately related to society. In actual fact, reality testing begins early in life, when the individual first interacts with his environment, when he first begins to differentiate "self" from "other," as part of the socialization process. Similarly, fantasy as an outlet for needs continues to operate late in life. And we have seen that aptitudes, needs, and experience interact to produce interests, which *ipso facto* have to some extent been reality tested. Ginzberg's formulation is helpful only in that it points up the fact that, as the individual is about to enter the world of work, the tests of reality are more severe, their effects more visible than are those of earlier developmental stages.

The interest aroused in the problem of occupational choice by the formulation of Ginzberg and associates, and by the formulations which followed the publication of his study, led the Social Science Research Council to sponsor a summer seminar on occupational choice (35), the participants of which were six economists, psychologists, and sociologists. Pooling the approaches of their three disciplines and studying the pertinent literature, they concluded that four characteristics of individuals and four characteristics of occupations determine occupational entry: 1) *the individual's* occupational information, technical qualifications, social role characteristics, and reward value hierarchy; 2) *the occupation's* formal opportunities or demands, functional or technical requirements, non-

functional or social requirements, and amount and types of rewards. Occupational choice was viewed, by this group, too, as a compromise process, a compromise between *preference for* and *expectation of* being able to enter various occupations. The compromise, however, was viewed as one which is continually being modified, thus avoiding the implication that there is no compromise until late adolescence. Instead, it is viewed as a series of interrelated decisions taking place in an extended developmental process. This formulation is essentially that suggested here and in the Career Pattern Study's monograph on vocational development (323), and also seems to call less for the use of the word compromise than for the term *synthesis*.

THE SYNTHESIZING PROCESS: LEARNING AND ROLE BEHAVIOR

Before attempting to describe the synthesizing process which is interaction, it may help to remind ourselves of what is being synthesized. It is, on the one hand, the personal needs and resources of the individual, and on the other the ecomonic and social demands and resources of the culture. The former, we have seen, include needs, values, interests, and aptitudes; the latter comprise the opportunities, experiences, and demands of the home and of the community. The developmental tasks described by Havighurst (141) include the expectations which society has of the individual as one of its members, and the roles which he must learn to play.

The synthesizing process has, surprisingly, still not been described. It is a *learning process,* and as such often takes place without verbalization, without full awareness on the part of the individual of what is taking place within himself or between himself and his environment. Learning often takes place in *role playing* and *role taking,* and is then more likely to involve some awareness of what is taking place in the self and between the self and the environment.

Learning contributes to the synthesizing process, that is, to the integration of the person, through the individual's attempts to meet his needs, satisfy his values, find outlets for his interests, and use his aptitudes. The meeting of a particular need may be found possible through the exercise of a certain aptitude, but if in the process another important need or value is frustrated or defeated there is no incentive to express that need in that way again. Thus a boy may attempt to meet his need for status by using his artistic aptitude but, on finding that artistic success is not valued by his peers and brings ridicule instead of praise, may give up his artistic endeavors and try some other status-giving activity. Finding that his interest in building model

trains also utilizes his artistic ability, and that success in this activity wins the praise of his peers, the boy then develops a preference for technical activities and comes to aspire to a technical career.

The satisfaction which is derived from the rewarded use of abilities, the approved meeting of needs, the accepted manifestation of interests, and the social realization of values channelizes personal resources. It may produce synthesis. The result is then an integrated person whose personal resources are harmoniously allied, attuned to the cultural resources of his environment, and adequate for the developmental tasks with which he must cope. Learning may, however, take place in such a way as to produce conflict, for incompatible needs and values may be rewarded, and aptitudes may be developed which may be exercised with approval in some contexts but not in others. The result is a poorly integrated person who is ill equipped to fit into his environment and to meet the requirements of society.

Role taking and role playing begin in childhood, as children play at being father and mother, teacher and children, and other key figures in their environment with whom children may identify. Just as reward or satisfaction is the basis of learning, so identification is the basis of role playing. If the role brings rewards it is learned, it is continued. Role playing continues into adulthood, as employees try to imagine themselves in the boss' role and as older workers picture themselves in retirement. Both kinds of role behavior are functional, and both can contribute to the synthesizing process. They are learning situations in which the individual learns something about what it is like to be an adult, a teacher, the boss, or old. How functional the role behavior is depends in part upon the balance of reality and fantasy. If it involves a good many of the important reality factors the learning value will be adaptive, but if the fantasy element is strong and the individual's needs are allowed to distort reality the learning may be maladaptive.

Little use has been made of the *concepts* of role taking and playing (338) in the literature of vocational development and guidance, but they have been implicit in many vocational guidance practices, have recently been found useful as a means of formulatiing ideas as to what takes place in vocational exploratory activities (316), and the *methods* have been used in training both counselors (in interviewing) and job applicants (in job seeking). White (356:317) has drawn on the concepts, in the form of ego identity and identification. In fantasy, in school classes and activities, in part-time jobs, in regular employment, the individual tries himself out in various roles. His daydream roles may be detached from reality, or they may incorporate many important aspects of reality; his extracurricular activities may be as remote from occupational realities as stamp collecting, or as close

to them as raising and selling animals in a Future Farmers of America project. The role behavior may involve little awareness of what is happening, or it may be engaged in with the deliberate intention of finding out what it is like to play that role. It may be largely affective in its origins, as in identification, or it may be cognitive, as in a trial job. It would be helpful to know the relative value of both types of activity, but it seems altogether likely that, whether affectively or intellectually inspired, the better focused, deliberate role-playing activity produces more learning than does that in which the role playing is unplanned and unevaluated.

Stone's research (301) in the effects of occupational information classes and vocational counseling makes it clear that a combination of getting occupational information and consciously considering it in the light of information about the self is better than merely acquiring the information or merely analyzing oneself. In role playing, it seems, the individual has an opportunity to examine himself in the light of situational (i.e., occupational) information, to test his self-concept and identifications against reality. He can, either in fantasy, in the semi-reality of a school club, or in the reality of the job, try out his abilities and his interests, test ways of meeting needs and achieving values, and evaluate the results of this reality testing as revealed in grades, in peer reactions, in supervisors' evaluations, etc. If his perception of his personal resources is inadequate, he has opportunity to revise it; if his understanding of social outlets for and evaluations of his desired role is limited, he is stimulated to clarify and expand it; if his identifications are inappropriate for one with his characteristics and attributes, he has opportunity to find this out and to make other more appropriate identifications.

It has been pointed out that although social interaction is important in understanding the development of the self, it does not satisfactorily explain the selection and synthesizing process which leads to the development of a self-picture. White's comments on this subject are pertinent to vocational development. In fact, it is perhaps significant that he derived his theory of personality from studies of cases of personality development in which the vocational content was of central importance. He writes (356:317):

> There are two ways in which a person selects among the many social "judgments" that are available for a self-picture. He selects partly through a knowledge of his own ability—his sense of the ease and confidence with which he can perform certain acts or take certain roles. He also selects on the basis of his identification. He himself is much more interested in being one kind of person than in being another kind. By combining the social view of the self and the psychodynamic view of ego identity we come much closer to understanding the vital center in the organization of personality,

and hence the process of vocational choice and adjustment. Development may thus take place through direct self-evaluation of experience, through the internalization of the other evaluations which are experienced, and through the selection of experiences and evaluations on the basis of identifications with others. Role playing provides opportunities for reality-testing experiences. These are learning experiences.

PART 4

IMPLICATIONS AND APPLICATIONS

In the three major parts of this book we have been concerned with the nature of work, the course and cycle of the working life, and the factors which affect vocational development. In this final part we consider some implications and applications of what we have seen. In Chapter 22 we take up the implications of the nature of vocational development for general development and adjustment, particularly the relationships between adjustment to work, adjustment on the job or in the workplace, adjustment in the community, and adjustment in the home.

Chapter 23 deals with implications for and applications to vocational guidance and personnel work. Orientation methods, techniques of appraisal, and counseling techniques are examined in order to ascertain what our understanding of the process of vocational development suggests concerning their nature and use. Programs of vocational guidance and personnel services are considered in the same manner. With this discussion, the treatise ends.

22

VOCATIONAL ADJUSTMENT AND GENERAL ADJUSTMENT

Work, occupying eight hours out of twenty-four, five days out of seven, fifty weeks out of fifty-two, fifty years out of seventy, occupies a prominent place in the life of modern man. Together with home and community, it is the focus of his activities, it provides the stage upon which he plays one of his major social roles. In fact, during many of his other waking hours man is occupied with preparing for or resting from work, or with work-determined activities such as entertainment and community service. During much of the time which precedes and succeeds his working years he is occupied with getting ready for work or with finding substitutes for it.

Since work has a central role in human life, it is not surprising that vocational development is easily viewed as the implementation of a self-concept. If a person cannot "be himself" in such a major segment of his life, if the role in which he is cast while on the stage on which he spends so much of his time is not congenial, it seems unlikely that his life satisfactions can be significant or that his general adjustment can be good.

ROLES AND SELF-REALIZATION

In seeking a better understanding of the relationship of vocational to general adjustment, it is helpful to begin with the individual and his roles as our starting point. Consisting, as he does, of a complex of aptitudes, interests, values, traits, and needs, the individual seeks outlets for these characteristics. As one who experiences reality directly from things as well as from persons, he learns that he does certain things easily and well. As a social creature, he learns that certain ways of using his abilities and meeting his needs win approval and are encouraged. He learns, too, to identify with certain individuals and certain kinds of persons. He comes, thus, to aspire to perform a certain kind of role in relation to the world and in relation to the people in the world.

Role playing is therefore a means of self-realization, just as it is a means of self-exploration. The *role expectations* of the job, of the home, or of the community may not be the same as the *role aspirations* of the individual.

In such a case the individual must adapt himself to the requirements of the situation, adapt the situational requirements to his needs, or leave the scene. Since some of these alternatives may be impossible and others difficult, frustration and maladjustment in some degree are likely to occur.

Several different kinds of research findings fit in with this description of vocational adjustment as a function of role taking. People gravitate toward occupations which are appropriate to their abilities (252), and persons who have too much ability for their jobs tend to leave them for more demanding work, i.e., work which requires them to take a role more in keeping with their abilities (10, 282). Men tend to enter occupations which are appropriate to their interests, and men whose interests are not like those of men in the occupations in which they find themselves tend to leave these fields for more congenial fields of work (304). Men seek work and occupations in which they can be the kinds of persons they want to be. Similarly, those whose strongest needs find appropriate outlets in their work tend to be satisfied with their occupations, while those whose needs do not find adequate expression in their work tend to be dissatisfied (279). Those who are expected to play conflicting roles tend to be anxious and ineffective (51, 119, 362) in them.

Role Expectations. Executives are expected to be capable of making decisions, to act with authority, to live well; lawyers are expected to understand the proper conduct of personal and business matters and to take part in public and community affairs; physicians are expected to be interested in people's ailments and to be available in emergencies to people who need them; teachers are expected to be devoted to their subjects and their students, to be willing to work for relatively low pay, and to live and dress with appropriate lack of ostentation. These role expectations result in the attraction of persons who want to play these roles to these occupations, and in the repulsion of many who know they do not wish to play such roles. Thus the sons of executives tend not to aspire to scientific occupations, even when they have appropriate abilities (170, 200, 202), for their subculture and their role models lead them to aspire to see themselves in executives' roles. Similarly, men with literary and philosophical interests and values who enter banking or finance tend not to stay in that field but shift more often to education or to writing. And women tend to see themselves as helpers—wives, nurses, secretaries, teachers, administrative assistants—rather than as leaders or creators (303, 339).

Role Shaping. There are exceptions, arising from the fact that if the individual can meet certain critical role expectations well enough he may be excused from meeting others, or he may succeed in finding an exceptional

situation in which he may play his desired but deviant role in that occupation. In some occupations, in some jobs, in some positions, the individual has a good deal of freedom to structure the work according to his own personality. This is why most research in the relationships between personality traits and success in professional and managerial activities has yielded negative results, while interests and values tend more adequately to differentiate men in these occupations (313: Ch. 16–19).

The occupations of executive, lawyer, physician, and teacher can apparently be successfully filled by people with a variety of personality patterns, even though it is true that each of these occupations carries with it certain role expectations. Thus one qualified man who left the field of finance for economic reasons during the depression years was a successful person in the less appropriate field of teaching and educational administration. He worked in metropolitan suburban communities in which he lived like an executive among executives and managed the education of their children. Thus John Stuart Mill functioned as a philosopher and political scientist in his free time, while conforming as a clerk during his working hours. Thus also some physicians who seek prestige and income in their occupation limit the nature of their practice in ways which free them from emergency demands and minimize their activities in service to individuals. In general practice they make house calls only in emergencies which they tend to avoid, they enter impersonal specialties, or they become administrators. And yet the very fact of professionalization involves organization, the imposition of standards, and the punishing of offenders.

Role Playing. The person whose occupation enables him to play a role which is like that to which he aspires is to that extent and by definition well adjusted. If he is also qualified to play this role, that is, if his self-ideal (role aspiration) and his actual self are in accord, he is in an even broader sense well adjusted. White's case studies (356) well illustrate this theory; research by Schaffer (279) and Brophy (in process) provides some verification.

Role Conflict. We have seen, however, that some occupations carry with them expectations for conflicting roles, and that some life situations require social behavior which is incompatible with occupational role behavior. The studies of druggists (204), military instructors (119), military chaplains (51), and insurance salesmen (262) have made it clear that when the occupation calls for the individual to play two incompatible roles such as those of scientist and entrepreneur, authoritarian and educator, warrior and peacemaker, competitor and friend, anxiety and impaired performance are likely to result. This is particularly true if the role expectations of the

occupation are rigid and well defined, as in the case of chaplain (officer and minister); it may be less so when the roles are poorly structured, as may be the case in occupations which are not professionalized or organized as crafts. It would be interesting to ascertain, for example, what conflicts the "colleague," "individualistic," and "friendly" physicians studied by Hall (135) manifest and suppress, for it seems likely that the competitive, commercially-minded individualists must also feel some pressure to function as good colleagues in the profession (they must have access to hospitals, etc.) and to function altruistically in meeting the needs of patients. Or perhaps considerable role shaping is possible in some professions and crafts even though not in others, making it easy to choose among these several possible roles.

THE GENERALITY OF ADJUSTMENT

We come next to the question of the generality of adjustment. Is vocational adjustment synonymous with social and personal adjustment? Does being well adjusted mean that a person is also satisfied with his work? Does helping a person to find satisfying work result in his becoming generally well adjusted? Before we can make any progress with these questions, we must examine what is meant by the terms general adjustment, vocational adjustment, family adjustment, social adjustment, and personal adjustment.

General adjustment is, by definition, virtually undefinable as such. It is the sum total, or rather the synthesis, of all of the special types or aspects of adjustment. Then how does general adjustment develop as a generalized characteristic? Is it a synthesis or derivative of a number of situational adjustments? How are they combined, or how is it derived from them? Adjustments are learned behavior, not innate qualities, although neural and endocrine makeup undoubtedly make some kinds of learning easier and others more difficult. Behavior can be learned only as a specific which becomes generalized, not as an abstraction which is then applied to all situations. The specific situations in which behavior is learned are, during the growth stage, those of the family, with the community and then the school providing new situations which supplement those of the home. These situations all involve social relationship, and all are also personal, in that they provide not only interpersonal action (contacts with other persons) but also intrapersonal action (contacts with one's own abilities, feelings, and emotions, i.e., with the self). Hence we may reason that personal and social adjustment are related but not necessarily identical entities, first learned in family, neighborhood, and school situations which provide both inter-

personal and intrapersonal experiences. In late adolescence or early adulthood work takes the place of school as an adjustment situation, and the community replaces the neighborhood.

Family Adjustment a Primary Contributor to Personal and Social Adjustment. Because of the sequence in time, then, the family is the major contributor to both personal and social adjustment. It is in the family situation, as most approaches to personality theory agree, that personality begins to take shape and that the nature of the adjustment begins to be determined. As Friend and Haggard found (108), and as White's case studies show (356), the nature of the parental roles and the parent-child relationship foreshadow the nature of the role played by the adult worker. The types of social roles and relationships learned in the family situation tend to be carried over into neighborhood, school, and work situations. Hence it has been easy for discussions of adjustment to deal with family adjustment as though it were synonymous with general adjustment, and hence it is an important determinant of adjustment in other situations, such as work, in which interpersonal relations are important. Similarly, the first opportunities for self-exploration and self-knowledge occur in the family situation. Hence family adjustment plays an important part in determining the personal adjustment of the maturing child and adolescent.

But learning does not cease when the individual begins to move from the family into neighborhood and school, and from there into the world of work. Some of the interpersonal relationships of the neighborhood, school, and work do resemble those of the family. But the greater variety of persons encountered, and their varying adjustments, provide new learning opportunities in interpersonal relations, differently structured from those of individual or group psychotherapy but often of equal involvement and greater duration. New modes of adjustment are therefore learned, and social adjustment in the school, neighborhood, or work may develop into something quite different from social adjustment in the family. It may even result in changes in social adjustment which bring about changes in family adjustment. Just as new modes of social adjustment may be learned in new situations, so new modes of personal adjustment may be learned. New aspects of the self may be discovered, new self-evaluations emerge, and personal adjustment also may change as a result of neighborhood, school, or vocational experiences.

Personal and Social Adjustment are Basic. We are led, then, to conclude that there are two basic aspects of adjustment, personal and social. The former has to do with intrapersonal or intrapsychic organization, functioning, and feelings. The latter refers to interpersonal relationships, functioning, and feelings. These two aspects of adjustment manifest themselves in the

various life situations in which the individual finds himself—in the home or family, in the neighborhood or community, and at school or on the job. The basic modes of adjustment, both personal and social, learned in the primary family situation set the pattern for adjustment in other later situations. But since the individual continues to learn, new modes of behavior are acquired, new adjustment patterns develop, and personal and social adjustment in the home may differ in important ways from adjustment at school or at work. It thus is to be expected that the intercorrelations of scales measuring personal, social, family, peer-group, school, and work adjustment would be positive and significant, but substantially short of unity. This has been shown to be the case in studies such as Heron's (147, 149) with adjustment inventories, in studies such as that of Friesen (109), in which techniques were used which provided measures of vocational, community, and personal adjustment, and in a study of college graduates by Inlow (161). Case study methods such as those used by Benassy and Peinard (25) also show a relationship between vocational and general adjustment.

THE MEANING OF VOCATIONAL ADJUSTMENT

The concept of vocational adjustment needs further refinement and definition if it is to be useful in vocational development theory and in the practice of vocational psychology and guidance. It must be seen in relation to the concept of general adjustment and the more operational concepts of personal, social, family, community, and school adjustment; it also must be defined in more concrete, operational terms.

Specific Work Objectives. A number of attempts have been made to define vocational adjustment operationally, but most of these have been atomistic in their approach. The studies of job satisfaction reviewed in Hoppock's *Job Satisfaction* (152), in various issues of the *Personnel and Guidance Journal* by Hoppock and others, and in the *Handbook of Applied Psychology* by Hoppock and Super (153), have tended to relate generalized expressions of job satisfaction to expressions of satisfaction with specific aspects of work. These include, for example, earnings, hours, advancement, opportunities, self-expression, independence, variety, managerial policies, appreciation shown, things done on the job, the general type of work, the people one works with, and the way people treat the worker.

Attempts to classify these very specific factors in job satisfaction or vocational adjustment into broader categories, thereby seeking more readily used definitions, have been made by Friesen (109), by Ginzberg, Ginsburg, Axelrad, and Herma (126), and by the Career Pattern Study (321, 323). Friesen

dealt with two aspects of attitudes toward work: attitudes toward the work situation, and attitudes toward the work itself (and also with extravocational attitudes not relevant here). The *work situation* is a composite of management, supervision, pay, etc. *Work itself* is the actual work activity, the operations engaged in by the worker, and the materials, ideas, problems, etc., worked with by the worker. That the logic behind these distinctions is poor or that Friesen's implementation of the distinctions was inadequate is shown by an intercorrelation of .73, corrected to .97, between scores for work-itself attitudes and work-situation attitudes for a group of women newspaper office workers. His scoring methods suggest the latter explanation, for there seems to be some confusion of work activity with work situation (e.g., duties and responsibilities are classified under work situation rather than under the work itself).

Intrinsic and Extrinsic Work Orientations. No research has been reported by Ginzberg and associates (126) on this topic, but in discussing occupational choice they break work values or satisfactions down into three broad categories: the work itself, the concomitants of work, and the outcomes of work. How well each of these satisfy, and their relative importance to individuals, appear to be central to vocational adjustment. The *work-itself* category resembles Friesen's work-itself category, but is somewhat more adequately defined to include the things done on the job which are essential to the work, the general nature of the work; the *concomitants* include managerial policies, supervision, associates, independence, and other situational characteristics which may vary from job to job in the same occupation (Friesen's work-situation category); and the *outcomes* of work consist of rewards such as pay and prestige, and of products such as the good done to people, material objects provided, and beauty created.

In the Career Pattern Study an instrument was devised to measure the relative strength of each of these types of values. Fifteen values were defined, classifiable under the three headings of work activity, concomitants, and outcomes. A number of studies have been completed and others are under way in order to explore the adequacy of these formulations and of the instruments measuring them, the *Work Values Inventory* and content-analyzed interviews. In pursuing the work with these concepts the categories of concomitants and outcomes have been combined under the heading *rewards,* and these have been treated as one end of an intrinsic-extrinsic (task vs. pleasure) work-orientation continuum. Intrinsic values are those inherent in the work activity and extrinsic values are generally the rewards. This may require shifting some *outcomes* from the extrinsic to the intrinsic category—doing good to people may have more in common with valuing work for the

work itself than with pay and prestige—but these are matters for empirical determination. The intercorrelations should indicate what kind of grouping of specific values is justified. If the result proves to be the substantiation of Ginzberg's definition of work satisfactions, our understanding of the nature of vocational adjustment will be improved.

Adjustment and Self-realization. Underlying all of these definitions of vocational satisfaction and attempts at classification of its components lies the proposition that vocational adjustment is a function of the degree to which an individual is able to implement his self-concept, to play the kind of role he wants to play, to meet his important needs in his work and career. This means self-realization.

THE EFFECT OF IMPROVING VOCATIONAL ADJUSTMENT

This leads us back to a question asked early in this chapter, namely, that of the extent to which improvement in vocational adjustment can lead to improvement in other aspects of adjustment. Logically, it should do so, since general adjustment is a synthesis of specific adjustments. Changing the nature of one of the major components of the synthesis should change the nature of the synthesis. Two hypotheses seem relevant here, and are set forth in the next paragraph.* Unfortunately, no systematic research has as yet been conducted to test these ideas. They do enjoy a considerable amount of popularity among counseling psychologists today. They are briefly discussed below, and the case of John Stasko, which has been described in Chapter 9, illustrates, but of course does not prove, the hypotheses.

One hypothesis is that, by relieving tensions, clarifying feelings, giving insight, helping attain success, and developing a feeling of competence in one important area of adjustment, the vocational, it is possible to release the individual's ability to cope more adequately with other aspects of living, thus bringing about improvement in his general adjustment. The second hypothesis is that this is best done by building on the individual's assets, by working with his strengths rather than with his weaknesses. The emphasis is not on pathology, but rather on hygiology.

The first hypothesis parallels that developed about twenty years ago by Jessie Taft in her *Dynamics of Therapy* (328), namely that the client's experiences in the controlled relationship with the therapist result in ability to establish and use constructive relationships with other persons not in the

* The material which follows has been taken, with minor changes, from the writer's paper "Personality Integration Through Vocational Counseling," *J. counsel. Psychol.*, 1955, 2, 217–226, by permission.

therapeutic situation. Taft's hypothesis is, actually, to the effect that improvement in one aspect or phase of social adjustment will bring about improvement in others. Our combined hypotheses are that assisting a client to use his assets in order to make a better vocational adjustment will result in his being able to make a better adjustment in other areas of living.

It should not be inferred from the above that it is assumed that all maladjusted persons can be helped by vocational counseling. This neither follows logically nor is it likely to be true. This hypothesis is simply that maladjusted persons who have genuine problems of vocational adjustment, which can be worked on directly, will find that improvement in the latter will bring about improvement in the former.

Just what the criterion of genuineness of a vocational problem coexisting with an emotional problem is, still needs to be determined. At this stage it is possible only to suggest that in fairly well oriented people the genuineness of a vocational problem is a subjective matter, that if a lucid client thinks he must make vocational plans or is having difficulties related to his work, the problem is genuine enough to make possible vocational counseling which may have therapeutic value.

No clear criteria have been formulated by which to determine whether or not such a vocational problem can be worked on directly, rather than having to wait until deep-seated emotional problems have been cleared up. Perhaps here too the client's readiness to work on the vocational adjustment problem is one criterion of the wisdom of working on it. But this alone is not enough; the maladjusted client must also be willing to work, at least occasionally, on his related emotional problems in other areas. That this may be a prerequisite to progress in vocational adjustment is suggested by cases in which progress with vocational problems was made after some time was spent, incidentally to vocational counseling, in dealing with personal problems.

23

METHODS AND TECHNIQUES OF VOCATIONAL PSYCHOLOGY AND GUIDANCE

In this chapter we shall take up, in sequence, methods of orientation, appraisal techniques, counseling techniques, and finally, the nature of vocational guidance and personnel programs. While these have been described in more detail in special texts on these subjects, it is important here to examine practices in the light of our understanding of vocational development.

ORIENTATION

Orientation Begins Early. The young child, aspiring to be an adult, tends to identify with older persons and to engage in playing the roles he sees them take. Since occupational roles are of central importance in our society, much of his role playing and many of his identifications are vocational in content. Orientation to the world of work therefore begins at an early age, during the preschool years, and continues during elementary school. Attitudes toward work itself and toward occupations begin to take shape, as in the case of the third-grader who balked at mending his torn trousers because "that's women's work," but who learned through a perceptive teacher and a field trip to a garment factory that men also sew. By the time boys and girls reach the eighth or ninth grade, where they may first encounter a formal unit of study devoted to occupations and to self-analysis, they have already formed ideas about the nature and suitability of many kinds of work, and about their own abilities and interests. These ideas are still generally vague and ill formulated, and they are subject to change with new experiences, but this does not mean that vocational exploration and orientation start in the junior high school. The early and middle teens involve an acceleration of and emphasis upon exploration and orientation rather than their initiation.

An important implication of the above is that the curricular and extracurricular activities of the elementary school need to be so organized and conducted that pupils begin to acquire varied and realistic information about the world of work and about occupations, as Bailard (15), Torrance (336), and others have pointed out. Children thus develop a fund of atti-

tudes and information which will be helpful to them when they reach the choice points of junior and senior high school. The teaching of social studies, natural science, and English can be so handled as to familiarize pupils with work and occupations as interesting and important aspects of the subjects. Geography involves, for example, not only the products of a region but the work and way of life of the producer. Dramatics provide opportunity for role playing. The school paper, orchestra, and cafeteria are miniature work situations, involving miniature jobs.

It Continues Late. Orientation not only begins early, it continues throughout most of life. During the growth period, the child develops ideas about work, occupations, and himself in relation to them. During the exploratory stage of adolescence he tries himself out in preliminary ways and makes directional choices, improving his orientation to careers in the process (27). Reaching the establishment stage, the young adult needs orientation to methods of making a place for himself and of advancing in his field. In due course he needs orientation to the maintenance stage, to find out what it means, in his case, with his health and his resources, with his situation and its demands, to reach the stage at which men generally cease breaking new ground and finally hold their own. Before many years go by, retirement looms ahead of him, but if he makes good use of what we know about life stages and work periods he anticipates retirement, becoming oriented to the kinds of changes his declining years are likely to call for in his career, and planning satisfying ways of making them when the time comes.

Since formal education ceases, typically, during the exploratory or in some few fields during the establishment period, it is clear that some orientation to the total life span should be provided by high school and college. Since this is not likely to be very meaningful for adolescents, with their concentration on immediate adjustment, informal and adult educational methods must be relied upon to provide the necessary orientation as the adult progresses through life. Company personnel policies and activities have in recent years begun to move in this direction, with their executive development, management succession, supervisory training, employee counseling, and retirement counseling plans, but what has been done is barely a good beginning. Other methods of reaching people must also be developed to supplement those used by employers. Adult school and continuation center offerings are one possibility. Relevant here also are the old age counseling programs launched by some vocational guidance centers and social agencies. Too many of these, however, have been remedial in nature rather than preventive, for they tend to work with the problems which are brought to them, and these come as actual, not emergent, problems.

Orientation Must Implement Democracy. Orientation programs may be narrow in scope and limited in perspective, perpetuating the *status quo* and serving the interests of small groups, or they may be broad in scope and in perspective, opening up new possibilities and serving the interests of society as a whole. Most people have little understanding of the ways of life and work of persons who are substantially above or below them on the socioeconomic scale. Hence most boys and girls have some orientation to occupations somewhat like those of their parents and neighbors, but little knowledge or understanding of other types of work. Thus the largest reservoir of talent, the children of semi-skilled parents,* has, as Reynolds and Shister (257) have shown, a very poor orientation to the higher level occupations for which many of them have abilities and in which society desperately needs them.

As the principal institution charged with human development, the school is the logical agent of democratic society in providing the needed orientation. In doing so, it helps able young people find appropriate ways of using their abilities in meeting society's needs. Such changes in orientation do not come about without planning.

Orientation Must Have Meaning. In many occupational orientation programs, information has been broadcast at students on the assumption that they would assimilate it, store it away, and use it as needed. Such practices violate all that we know about learning, which takes place in response to a felt need and to the satisfying of that need. This is why studies evaluating vocational orientation programs (110, 155, 301) have generally demonstrated the relative ineffectiveness of purely information-giving programs. They have proved effective only when focused on the felt needs of the students or employees, and are best when combined with individual counseling. The counseling is necessary in order to help the individual realize his needs, seek appropriate information, apply it to himself, and accept its implications. Occupational information services and activities, therefore need to be planned with the needs of a particular group in mind; they have to be individualized and they must be preceded by and followed up with individual counseling. Information may seem to be objective, readily used by individuals who should apply it to themselves, and hence broadcastable, but experience has shown that anything pertaining to the self is subjective, full of individual meanings, easily distorted by personal needs, emotionally toned (53; 236; 313: Ch. 21). Counseling helps prevent distortion, makes the facts acceptable, frees the individual to use them.

* Parents from the higher socioeconomic levels are more likely to have bright children than are parents from lower socioeconomic levels, but the latter parents, being more numerous, produce the majority of talented children (330).

APPRAISAL TECHNIQUES

A Problem of Overemphasis. We have seen that psychology has provided vocational guidance with a variety of analytical and predictive devices in the form of tests of intelligence and aptitudes, proficiency, interests, and personality traits, and that these have come into widespread use as a standard part of appraising vocational promise and fitness. Because of the slow and uneven development of formal programs of vocational guidance in the schools and colleges, there has been much emphasis on short-term vocational counseling at critical choice points in careers, as at the time of entry into high school, college, technical or business school, and entry or re-entry into the labor market. The needs of adults unemployed during depressions and the needs of veterans accentuated this trend, with short-term counseling becoming almost a standard procedure at the time of exit from military service and entry into advanced training or employment.

Although many psychologists and counselors were aware of the dangers implicit in this trend (310), and efforts have been made to point out various ways of keeping a better balance (43, 212, 236, 260, 271, 311, 319, 340), there is still a widespread tendency to think of vocational counseling as the giving and interpretation of tests with some reference to personal and occupational data.

Just a Part of the Counseling Process. Analysis and diagnosis, that is, appraisal, is of course just one part of the counseling process. Data about a person are collected, synthesized, understood, in order that they and their implications may be shared with the student or client, so that the latter may assimilate them and use them in his thinking. Counseling includes also helping him in this assimilation and using process, in so far as he needs such help.

Variety of Data and Sources Needed. If appraisal is to be well done, a variety of techniques of analysis, synthesis, diagnosis, and prediction must be used (111, 313). So many factors affect vocational development, these factors are so interdependent and interactive, and our means of assessment are still so limited in nature, that to confine appraisal to the use of a few tests, or to an interview, or to a brief combination of these two, is to risk getting an incomplete and unbalanced picture of the person and of his prospects.

The personal data to be obtained should cover psychological and social data such as have been discussed in Chapters 14–16, and the situational data should include the social and economic data discussed in Chapters 17 and 18. The individual's economic resources, his contacts with the world of

work, and his *savoir-faire,* need to be assessed along with his intellectual and special abilities, his interests, his personality, and his skills. The counselor needs to know something about his client's role models, identifications, self-concept, motivation to achieve, concept of work, and the values he seeks to achieve in and by means of it.

Appraisal for counseling thus involves the use of a variety of techniques; tests, inventories, projective methods, interviews, observations, peer ratings, are all likely to be pertinent. No one or two of them, such as an intelligence test, an interest inventory, a projective technique, or interviews can be stressed at the expense of others. Occasionally, psychologists and counselors have attempted to do this. When tests were much more limited in scope than they now are, and interviewing was an unstudied art, some vocational guidance experts stressed the importance of activities and observation (45, 177). When interviewing was first effectively studied, those who were most impressed with its possibilities advocated using it to the exclusion of other methods (271). But, as more recent students of counseling have pointed out, effective counseling requires the use of combinations of techniques (43, 132, 246, 260, 311, 340, 382). Furthermore, when these various methods are used over a period of time, and data and insights accumulate, they are more effective than when they are used over a brief time span and the data are cross-sectional in nature (114, 115).

Appraisal Proceeds with Orientation. If career patterns are to be studied and their patterning is to be guided, the process of appraisal is best carried on with orientation and counseling as the pattern begins to emerge. The molding of men is not done by pouring them into casts, nor even by pressing them with forms; the process is more like one of sculpting or clay modeling, in which the block of stone or wire framework is appraised as work begins, in which the work progresses bit by bit, over a period of time, and in due course the final product emerges from the stone or is built up from the wire framework. The best appraisal work is done as a means to the guidance of development, while the individual is still developing, in situations such as schools which are designed to further development. Appraisal goes hand in hand with orientation.

Appraisal Is a Joint Activity. Under the pressure of time and numbers it is easy for a counselor to review appraisal information himself, come to some more or less tentative conclusions, and transmit these to his client. In fact, counseling has often been organized on the assumption that all appraisal work is done this way. The fees paid for vocational counseling have generally been scaled on the basis of three contacts with the guidance center, one for intake, one for tests, and one for counseling. In this method of

operation the counselor too often has no more than fifteen minutes in which to study the data, followed by forty-five in which to transmit them to the client and help the client make appropriate plans.

But experience has shown that the best appraisals are made collectively, as joint activities of counselor, consultants, and client (53; 236; 313: Ch. 21; 340). The counselor needs time in which to discuss findings with persons who know certain fields of work, certain kinds of training centers, better than he does. He needs time to confer with other counselors about the interpretation of seemingly conflicting data from tests, interviews, or references. He needs time to digest all these data himself, prior to reviewing them with the client, so that he can present them in a meaningful and constructive manner. He needs time to work with the client in examining the data which have been brought together, to discuss the client's reactions to them, to re-evaluate them in the light of new information the client is stimulated to bring up, to help the client explore his attitudes toward the data and, with the client, to arrive at and accept a more definitive and mutually acceptable picture of himself and of his situation. Thus effective appraisal, like orientation, is in part a reality-testing procedure, for the client is assisted in facing the realities of the appraisal data, and in helping him to face these realities the counselor also arrives at a better appraisal of the data and of the client. One of the outcomes of appraisal may therefore be the joint planning of further activities designed to clarify the client-counselor picture of the individual and his situation.

COUNSELING TECHNIQUES

Appraisal Leads to Counseling. The preceding discussion has brought out the fact that appraisal and counseling techniques at their best do not constitute two discrete categories but rather blend into or overlap each other (43, 246, 340). When superior appraisal work is done, the client is involved, and if the client is involved he develops some self-understanding, perhaps even some self-acceptance, which means that counseling has taken place. The co-operative nature of good appraisal work makes it merge with counseling.

The controversy which raged for some time during the 1940's, concerning the place of and need for diagnosis or appraisal of counseling, thus subsided for good reasons. When counseling deals with reality situations, as it does in vocational choice and adjustment, it is pertinent to help the client ascertain the adequacy of his self-concept (313: Ch. 1, 21). This involves reality testing, and tests and other appraisal techniques help the client to confront reality. Tests, to be specific, are approximations of reality in capsule form.

They may, of course, not be the best way of confronting a particular person with reality, at a particular stage of his development.

Exploring the Self-concept. Since vocational development consists of implementing a self-concept, and self-concepts often need modification before they can be implemented, it is important that the student, client, or patient put his self-concept into words early in the counseling process. He needs to do this for himself, to clarify his actual role and his role aspirations; he needs to do it for the counselor, so that the counselor may understand the nature of the vocational counseling problem confronting him. This means that more than one interview is often needed before any testing is likely to be helpful, and that whatever testing is done may better be done in scattered brief sessions as data are needed rather than in one or two long sessions of the shotgun type (314).

Vocational Counseling Technique is Cyclical. Thus vocational counseling often proceeds best if it is handled nondirectively at first, often for several interviews, shifting occasionally to directive handling when the counselor must help with reality testing, and back to nondirective methods again when reactions to reality are being explored (311). The case of John Stasko, described in Chapter 9, illustrates some shifting of counseling techniques in this manner: Mr. B may not have been as much a blundering beginner as Stasko perceived him to be, for his nondirective approach may have been important in getting the client ready for more directive work with Dr. C. Whereas nondirective or client-centered counseling (270) focuses on the self-concept and attempts to help the client clarify and restructure it solely by means of the client's percepts or notions of reality, vocational counseling attempts to help the client more expeditiously by facilitating his encounters with and his interpretations of reality. This calls for the cyclical use of nondirective and directive methods. Schematically, vocational counseling can be described as involving the following cycle:

1. Nondirective problem exploration and self-concept portrayal.
2. Directive topic setting, for further exploration.
3. Nondirective reflection and clarification of feeling for self-acceptance and insight.
4. Directive exploration of factual data from tests, occupational pamphlets, extracurricular experiences, grades, etc., for reality testing.
5. Nondirective exploration and working through of attitudes and feelings aroused by reality testing.
6. Nondirective consideration of possible lines of action, for help in decision making.

Vocational Counseling Is Coterminal with Development. We have seen that vocational development continues throughout the whole life span, from

growth and exploration to maintenance and decline. It thus becomes clear, as counseling psychologists and vocational counselors in various countries have recently stated (44, 114, 115, 118, 210), that vocational orientation must be continuous so that individuals may be prepared to cope with the differing kinds of vocational and adjustment problems which they will encounter as they leave one life stage and enter another. And we have seen that appraisal also is not something that is done once and for all, but something that is called for at intervals throughout life, as changes which have taken place and capacity to make forthcoming changes must be evaluated. Germain, a Spaniard, summarizing in a French journal the views expressed by two Swiss psychologists (118), calls this a "global and social conception of vocational guidance," and points out the new horizons which it opens up. Counseling is not a service solely for students, for entrants into the labor market, or even for those needing rehabilitation; instead, it is a service needed by most persons as they move through life, face new choices, and make new adjustments. The mature self-concept tends to resist modification, but be modified it must as age modifies the individual's capacities and as society changes its role expectations for him. The resulting frictions, pressures, and dislocations often require counseling in order that frustration and defeat may be avoided, in order that satisfaction may be derived from being free to function in ways appropriate to the present life stage.

IMPLICATIONS FOR VOCATIONAL GUIDANCE AND PERSONNEL PROGRAMS

Concern for vocational development is the monopoly of no one type of institution. It is a major responsibility of schools and colleges, for in them pupils and students acquire an orientation to life and to work, in them adolescents prepare to earn a living and to lead a way of life which is in large part determined by the method of earning a living, and from them young adults enter the world of work and launch their careers. It is a major responsibility of many other community agencies, of social agencies ranging from vocational guidance bureaus and employment offices to child welfare agencies and hospitals, for these agencies are concerned with the development of economic competence and the improvement of social adjustment. It is a concern of business and industry, for they are dependent upon human resources for their operations, as they well recognize in times of manpower shortages, making personnel development as important a subject of attention as technological development (372). In short, vocational develop-

ment is a major concern of society, for it is an essential to both the development of human resources and to technological and economic development.

Programs in Educational Institutions

The fact that education is a continuous process over a period of nine to twenty years, at a stage in life during which boys and girls typically develop a degree of self-understanding and of orientation to society prior to seeking to make their own places in the world, makes schools and colleges the most important single agents of vocational development. Mathewson in the United States (212), Galloy (114), Léon (190) and Marcan (210) in France, have well expressed this point of view. Summarizing the proceedings of a convention of vocational counselors in France, a country in which formal vocational guidance is carried on by counseling centers whose primary function is to work with boys and girls leaving elementary schools at the age of 14 and proceeding to apprenticeships, trade training, or employment, Galloy (114:229) states:

> We have repeatedly affirmed, and would like to convince everyone, that we cannot conceive of vocational guidance as anything other than progressive and continuous. . . . If we have replaced the term "vocational guidance examination" by the term "guidance consultation," it is not because of a minor and purely verbal concern, it is because we are convinced that . . . the health of our profession and especially the effectiveness of our work . . . depend upon the deliberate and well thought-out revision of our methods of work.

The school is in a unique position to guide vocational development, bringing the resources of society to bear on the individual, supplementing the more limited resources of the family to ensure an orientation to careers and a self-appraisal which will make the fullest possible use of individual talents. Counselors such as Mathewson and Galloy rightly believe that professionally trained counselors have a major contribution to make to this school function, and that it must be made on a continuing and progressive basis.

A Program Must Be Planned. Continuity of contact with individuals is not likely to result in individual growth and development unless the utilization of this continued contact is planned (115). Schools and colleges therefore need to develop and carry out educational programs which have as their objectives the development of adequate self-concepts in students, the orientation of students in the world of work, the translation of these self-concepts into occupational terms, and the testing of these vocational self-concepts against the realities of occupations (205, 359, 367). This last does not mean that schools and colleges should necessarily include work experience in their curricula. "Capsule" realities may be used, in the form of courses, activities,

testing, and other means of helping the student to try out his abilities and interests for their vocational uses.

Staff and Facilities are Required. Educational programs, whether they take shape as courses and course outlines or as extracurricular activities and clubs, do not come into being just because schools or colleges consider them desirable. Staff and facilities must be assigned to them, so that responsibility for developing them and resources for carrying them on are assured. Columbia College's famous course in contemporary civilization did not come into being overnight as a result of good resolutions. A sizable staff worked on it for several years. Neither did it come into existence as a result of assigning responsibility for it to the most available, the most popular, or the most-tired-of-classroom-teaching members of the faculty. The instructors who were considered best qualified for this particular task were assigned or recruited. If educational programs are to make their needed contribution to vocational development, the responsibility for planning and for co-ordinating them, and the responsibility for carrying out specialized aspects of these programs such as appraisal and counseling, must be assigned to staff members who are specifically trained in this type of work. A good biology teacher or a popular coach is, by definition, competent in certain aspects of classroom teaching or coaching athletics, but not, *ipso facto,* in orienting young people to careers and helping them to develop vocationally realistic self-concepts. The training called for is primarily psychological, supplemented by work in sociology, economics, and education. In schools it generally requires one year of specialized graduate work (175, 205); in colleges it is expected that most counselors will have completed the doctorate in one of the programs of study in counseling psychology which have developed in a number of universities since World War II (369, 369a).

Time. Counseling for the guidance of development, both personal and vocational, is best done in a series of interviews, spaced, lasting about an hour. It is not usually very effective, as shown by a number of studies (169, 183, 272), when it takes place in one or two contacts of much less than an hour each. Counseling also requires time for consultations, case conferences, and investigating resources which may be helpful to a particular student. It requires contacts which are continuous in the sense of occurrence throughout the educational process (115). The ratio of counselors to students should therefore be such that a counselor may confer with each student from three to six times per year, for periods of from half an hour to an hour, uninterrupted by telephone calls and visitors, during each year of schooling. In addition to counseling time, one or more staff members must have the time required for program development, for working with teachers and other staff

members to insure that they, too, are able to make their contributions to vocational development through their courses, activities, and student contacts.

Guidance for a Variety of Careers. The careers of men and women who enter the professions, managerial occupations, and, to considerable extent, clerical and sales occupations and the skilled trades, can justifiably be described as careers in the popular sense. They are characterized, we have seen, by a degree of occupational stability which makes the term "life work" applicable. Men and women who enter the professions typically enter them on leaving college or university, and remain in them. They have been characterized as having stable careers. Those who enter managerial occupations tend to work first in other types of occupations, but in due course progress through these trial jobs to managerial work, in which they tend to remain. Their career pattern is described as conventional. Those who enter clerical and sales occupations tend to have a more prolonged trial or floundering period before they settle down into what might be called a life work, and their stable work period begins relatively late, but they too may be said to have conventional career patterns. Skilled craftsmen tend to follow the same conventional pattern. Semi-skilled workers, however, reveal a variety of career patterns. Some—as in all occupations—stabilize early, and may be said to have stable careers as semi-skilled workers, but many seem to settle down in one occupation after a series of trials, only to move or to be uprooted from this occupation and to go through another series of trial work experiences. Their career pattern is best described as unstable. Unskilled workers show the same patterns, but with more falling into the multiple trial category. They tend to have unstable or multiple trial career patterns.

This brief review of types of career patterns brings out the fact that vocational development means, for a great many people, not the unfolding of a career in the popular sense, but rather movement toward and through a life of occupational change, of multiple trials and instability.

Career patterns of this type appear, at first thought, to be undesirable. The concept of instability, the idea of trying a number of times without ever finding stability, is incompatible with middle class values and foreign to a middle class orientation. Educators, professional people, executives, find the notion repugnant. The conclusion is often drawn that education and guidance should aim at helping everyone to develop a career rather than merely to have a career pattern. Vocational development and guidance, it is argued, should minimize or eliminate trial and floundering, helping everyone to embark upon an appropriate life work on the completion of formal education.

This appears to be a laudable objective. It is psychologically possible for persons qualified for professional careers; the professions are so organized as to make it practical; the investment in professional training makes stability important; and it is therefore easy for professional workers to conclude that this pattern would be desirable and should be possible for everyone.

But the objective of stability may not be appropriate for other types of occupations. Most managerial positions are believed to require experience in other types of work before the individual is ready for executive responsibility. Later, stabilization after some trial may be truly functional. Much clerical and sales work, and most semi-skilled occupations, are learned in relatively brief training after hiring, while actually on the job. The worker's investment in training is not at all comparable to that of the professional worker; if he changes occupations, the equity which he loses is often negligible, except in instances in which seniority affects his pay or advancement. Persons entering the skilled trades might be aided to prepare for and enter them earlier in their working careers, as was done in the old apprenticeship system, if the orientation and attitudes of the many who now flounder about in semi-skilled work for some time before entering skilled trades could be improved while they are still in school. But this actually seems to be the only occupational group to which the extension of the professional type of career pattern would be logical. It is significant that the skilled trades and the professions are the only types of occupations in which training is prolonged and involves an investment of time—and hence money—on the part of the student-worker. In the others, experience on the job (clerical, sales, semi-skilled) or preliminary to the job at other jobs (managerial) is deemed more important than formal training.

These facts suggest that occupational stability as conceived of by professional persons may not be the universal desideratum. For the semi-skilled worker, whether his collar be blue or white, occupational mobility, flexibility, versatility, may be a more appropriate goal. Just as the *professional worker tends to be geographically and institutionally mobile,* going wherever he finds the best opportunities to pursue his chosen occupation, so the *semi-skilled worker is occupationally mobile,* working at whatever job, for whatever company offers him the best work. We have seen that for the professional a good job is one in which he can use his knowledge, improve his understandings and skills, exercise his own judgment, and associate with interesting and intellectually stimulating people. He is work-oriented. For the semi-skilled worker in business or industry, a good job has been shown to be one in which he can work in a pleasant environment (not always defined in the same terms), with agreeable associates and supervisors, for good pay, at suitable

hours; he is outcome-oriented. For the professional, work is its own reward (*vide* Roe's eminent biologists); for the semi-skilled, work is rewarding because it makes life possible. Stability for the professional is work-centered; stability for the semi-skilled is living-centered.

This comparison of professional and semi-skilled (business and industrial) workers provides a clearer contrast than appears when managers and craftsmen are compared, although it is valid also for unskilled workers. Skilled craftsmen, we have seen, tend to resemble men in the professions. Executives are in some ways like professionals, sharing many of the same upper middle class values, but somewhat like clerical and sales workers, from whose ranks they tend to rise—except when they transfer from professional work—and whose interest in the rewards of work, in contrast with the work activity itself, they tend to share.

Vocational guidance programs in schools and colleges therefore need to take into account the fact that they aim to further the vocational development of some students who do, can, and should look forward to stable career patterns (a "life work"), and of many other students, often a majority, who do, can, and should look forward to unstable and multiple trial career patterns (a life of changing work).

Counselors in schools and colleges frequently ask what vocational orientation, appraisal, and counseling can do under these circumstances. The answers come easily enough for the "career" or stable career group; orientation, appraisal, and counseling have clear occupational objectives on which to focus. For the "noncareer," or more appropriately, unstable career, group the occupational focus is much more diffuse. For *orientation programs* this creates no great problem. Managerial, clerical, sales, and semi-skilled fields can be surveyed; the nature of the work, the patterning of careers, the way of life involved in each field can be understood. *Appraisal* is somewhat more difficult, but the kind of abilities, skills, interests, and values, the possession or lack of which characterizes persons in these fields, can be assessed by the usual methods. It is in the decision-making stage of *counseling* that counselors feel baffled with this group, for the vocational objective of work in a factory, in an office, in selling, or in business administration often seems too vague. It tends to leave the counselor, and the client who has absorbed some of the counselor's professional philosophy of planning and planfulness, with a feeling that the counseling is ending with insufficient planning. The remedy is clearly in a more adequate understanding of the world of work on the counselor's part, a better perception of the value system and life patterns of other social groups, and a willingness to work with people to help them achieve self-realization rather than to make them live up to the personal

goals of the counselor or of the social stratum from which he and his fellow educators happen to come. As Caullier has put it (60:173), what semi-skilled workers need is a *"Culture générale et formation polyvalente pour une adaptation rapide ultérieure," "une sorte de culture technique polyvalente"*—a sort of multipotential technical education.

Programs in Community Agencies

Much of what has just been said concerning vocational guidance programs in schools and colleges applies also to programs in community agencies. It will not be repeated in this section, although certain parallel problems will be taken up, when the form in which they manifest themselves in this type of institution alters the nature of the required action.

The fact that many schools and colleges have no formal programs of vocational guidance, and that many of those that do have developed them with the handicap of a limited philosophy, a limited staff, or limited resources, means that many vocational development needs are not met. As they go from school to college or technical school, or as they enter the labor market, many boys and girls find that they need more help than school or college has given them in making the transition. Furthermore, since vocational development does not stop with getting the first job, nor even with getting a satisfactory job, new problems of vocational choice and adjustment arise during the adult years. The needs left unmet by educational institutions, and the new needs which occur later in life, have led to the growth of many community guidance services.

Some of these are services provided by community agencies which have other objectives, of which vocational adjustment has been found to be a component. Thus many child and family welfare agencies, rehabilitation centers, hospitals, neighborhood centers, and fraternal organizations have found that their clients, patients, or members are helped to lead more satisfying, constructive, effective lives when they are helped to develop adequate concepts of themselves as workers, when they are helped to find appropriate outlets for their abilities and interests, and when they are given assistance in making the transition from dependency to independence (227, 245, 305).

Some of these services develop into independent or autonomous vocational guidance centers, serving the general public. The Vocational Service Center of the YMCA in New York, the Vocational Guidance Bureau of Cleveland which was once part of a child welfare service, the Vocational Guidance Bureau of St. Louis which was formerly a Red Cross service, and the Jewish Vocational Services which were once parts of family case work agencies in a number of major cities, are typical (117). In other instances, counseling

centers were created as independent agencies (28) in cities which felt the need for this type of service and found it insufficiently available in existing agencies. Thus arose the Vocational Counseling Service of New Haven, the Community Guidance Service Center of Bridgeport, and the Vocational Advisory Service of New York (74).

The Problem of Discontinuity. Some community agencies work with their clients over a period of years. This is particularly likely to be true of child welfare agencies, family services, some neighborhood centers, and rehabilitation agencies which serve severely handicapped clients. But more typically, and especially in the highly visible community guidance bureaus and counseling centers, clients are likely to be seen only a few times and over a period of two or three weeks. Clients often come to these centers when confronted with the need to make choices and decisions, some time after graduation from school, losing a job, or convalescing from an accident or illness. Feeling acutely the pressure to decide whether or not to go to college, to find a new job, or to begin training for a job, they convey this pressure to the counselor. It is easy, under such circumstances, to perceive vocational counseling as a crisis or emergency activity, as assisting in decision making rather than as guiding development. Mathewson (212: 376–379) calls it problem-point counseling; in a discussion of diagnostic methods the term cross-sectional has been applied (308a); our French colleagues refer to it as a vocational guidance examination (114).

This tendency on the part of clients and counselors obviously works to the detriment of effective, long-term, developmental vocational counseling. It makes demands of counseling which counseling is often ill prepared to meet, and it prevents counseling from making its major contribution. Constantly preoccupied with putting out fires, the fireman cannot work on fire prevention.

It seems clear that, under the circumstances, vocational guidance needs to find *better methods of rendering the emergency services* which seemingly it must render, and should embark upon a program of education, both within its own ranks and with the general public, to bring about *more developmental* as contrasted with problem-point, cross-sectional, short-term or *crisis counseling* (114, 190, 210, 212, 308a).

Improvement of Crisis Counseling. One method of improving short-term or crisis vocational counseling is to recognize it for what it is, to label it properly and clearly so that both parties, counselor and client, are fully aware of what is being done. Seeing the making of immediate choices and adjustments against the backdrop of life stages and career patterns should

both reduce the expectations from such counseling and make it more effective by relating it to what has preceded it and to what will follow it.

Better co-ordination with other institutions and agencies with which the individual client has had or will have contact is a method of minimizing the drawbacks of short-term counseling. It is not the client's life, as a rule, which suffers from discontinuity; he remains the same person, and very often continues living in the same community and circumstances, despite specific discontinuities or crises of education, employment, or health. The discontinuity is generally in his contact with the counseling center. In order to develop a synthetic continuity, the agency counselor must often pick up the threads of the past and the emerging threads of the future, not only through interviews with the client, but also by means of contacts with his schools, church, neighborhood center, family service society, employers, or other community agencies, selected on the basis of the roles they have played in his past life and the roles which they may play in the future. If these threads are woven into the counseling process, continuity of the fabric of the client's life and career can be assured. This is a type of skill which has been highly developed by professional social workers, and which vocational counselors who have worked in good social agency settings generally acquire; it is an orientation and skill which those who have worked primarily in educational institutions, or whose training has been oriented to work in educational settings, have too often not developed even though they may work with a given student for a period of several years.

The Interpretation of Vocational Counseling. Since crisis counseling needs will undoubtedly continue to arise, at least for a long time to come, action such as that just discussed is appropriate for the improvement of vocational counseling, but action designed to encourage more use of long-term or developmental counseling methods is equally important.

This improved understanding of vocational guidance must be spread both among the professional staffs of guidance agencies, and among the general public. Educationally trained and experienced counselors are likely to have this orientation, because they work in long-term programs with continuity of contact over the years. Social workers in child welfare work often have it, too, for similar reasons. But others with a social work orientation, and most psychologists trained in the pure science rather than educational tradition, find it too easy to view vocational counseling as an emergency service or as an application of differential psychology which is rendered over a brief time span, preferably once and for always. As has been pointed out in this text and elsewhere (317), this is true, at least in the case of psychologists, because of the disproportionately rapid development of diagnostic and predictive

techniques during the first decade after World War I, and because of the emergency needs of the depression of the 1930's and the manpower dislocations of World War II and its aftermath. Caplow's description of vocational guidance (55:221–226) is but one of a number of possible illustrations of the distorted picture of the process acquired by some observers. In so far as counselors are concerned, the corrective presumably lies in *better training in developmental psychology,* particularly in the psychology of vocational development, to supplement training in differential psychology, and in *better grounding in occupational sociology.* Coupled with this should go a firm grounding in *educational philosophy and methods.* Mathewson's treatise combines these approaches, focusing primarily on educational philosophy, in a consideration of guidance policy and practice (212).

For the general public and for members of kindred professions it would seem that better diffusion of the same basic understanding and orientation is called for. This will not be easy, for tests have the ready appeal of a panacea and, improperly used, produce the same disillusionment, whereas developmental counseling neither sounds nor is easy. It involves more of a commitment of the self to work things out than does taking tests and getting the answers. It is like losing weight by dieting rather than by taking a pill to destroy appetite. But the genuine has a kind of appeal which is not shared by the spurious, and many people are willing to work for real gains once they fully understand the reality of the benefits and the validity of the method. With public information procedures and media developed to their present high point, getting a proper understanding of vocational development and of vocational guidance to the public would seem to be largely a matter of decision and of finances.

Developing Long-Term Relationships. As counselors and public come to understand better the developmental nature of careers, as an informed security-mindedness leads to the more widespread realization that security is to be found in intelligent planning rather than solely in paternalistic or collectivistic protection, more people will want to develop and make use of continuing counseling relationships. By this is meant not that clients will start counseling and remain continuously in counseling until the grave, but that a counseling relationship will be seen as comparable to a relationship with a family physician, dentist, minister, lawyer, or trust officer. The family-physician relationship is valued because its continuity gives the practitioner a perspective on his patient which facilitates diagnosis whenever symptoms develop. The physician's knowledge of the patient's development, previous illnesses, circumstances, style of living, and propensities makes his diagnostic and prescriptive work easier. Furthermore, it facilitates preventive medicine.

The same characteristics are found to be true of good guidance and counseling relationships in schools and colleges. They could also be true of counseling relationships in community agencies, if client and counselor perceived and treated their relationship as one of a series. The three cases reported by Galloy and associates (115) well illustrate both failure and success along these lines. Just as the patient goes to the family physician when he believes he needs medical care, and occasionally for a checkup, so the client might view the counseling center as a place to which to go whenever confronted by a vocational choice or adjustment problem, and occasionally, perhaps, for a checkup on his vocational development.

This concept of the nature and functioning of vocational guidance is likely to be criticized by some as preserving dependency relationships rather than fostering independence. If mishandled, dependency rather than independence could be the result. But there is room for doubt as to whether occasional misuse of a tool or procedure should lead to its condemnation. The tool or procedure may itself be good, and the remedy may lie in training its users. The family physician, dentist, minister, lawyer, and investment-counselor relationships may also foster dependence, encouraging the individual to rely on them for knowledge and understandings which he could get from books and from contacts with other people. But the suggestion that they be avoided, except in emergencies, is rarely if ever made. Instead, they are perceived as resources which can be more helpful if the relationship is a continuing one, available to help when needed, in a position to draw on previous contacts when help is called for, and consulting occasionally as a precautionary or planning measure in order that future decisions may be made in the light of adequate information and advance planning.

Life-stage Counseling. Vocational counseling started as a service of youth leaving or recently out of school, and moved into the schools to do preventive work, not only in the United States (46), but also in western European countries, where the trend is now strongly in this direction (118, 121, 247). Thus some community agencies began with the vocational guidance of adolescents as their sole responsibility, e.g., the Vocational Guidance Bureau of Cleveland and the Vocational Advisory Service of New York. Others began their work with young adults as their concern, e.g., the Vocational Service Center of the New York YMCA. But the fact that vocational life can be divided into a series of work periods or stages, in each of which new adjustments need to be made and new problems come to the fore, means that vocational counseling needs are brought to community agencies by men and women of all ages. Services have accordingly been expanded to take a greater variety of clients. The Vocational Guidance Bureau of Cleveland has de-

veloped special work with middle-aged women, with the aged of both sexes, and with the physically handicapped of all ages; the Federation Employment and Guidance Service of New York has spearheaded local work in the counseling of older workers; the YMCA Vocational Service Center has similarly expanded its work to meet the needs of more mature persons; and the United States Employment Service has provided leadership at the national level (232, 380). As the age range of vocational counseling increases, it should become easier to develop such services on a continuity or development, rather than on a discontinuity or crisis, basis.

Knowledge of Career Patterns Will Help. Just as we have seen that vocational guidance in educational institutions can be improved by knowledge and use of career pattern data, so too can the vocational counseling services of community agencies be improved by reference to career patterns. The counselor needs to ask himself what has been the patterning of the client's previous educational and vocational career, what its extrapolation or projection into the future suggests may be in store for him, what have been the subsequent careers of others whose early careers resembled that of this client, how this client's personal and social resources may be expected to make his career pattern deviate from the norm, and what he and the client can do together to bring other resources to bear in order to improve his prospects. The counselor may well view his task as that of mobilizer of resources for the facilitation of desirable mobility. His training should be that of a counseling psychologist (334, 369, 369a), a psychological counselor (42), or a rehabilitation or vocational counselor (133, 371).

Programs in Business and Industry

Business and industry have long recognized their stake in vocational development. Sometimes the recognition has been grudging, sometimes it has been limited in its scope, but it has generally been visible in some form. It was more than a century ago that Robert Owen showed that educating his workers at New Lanark could be profitable, and two score years ago that the industrial expansion accompanying World War I gave impetus to programs for the better selection and training of executives, supervisors, and other types of personnel. It was about a quarter-century ago that the Hawthorne experiment of the Western Electric Company demonstrated that employee counseling could result in more effective workers, and set the pattern for the great expansion of personnel services of World War II (282). From this stemmed a new emphasis on executive and supervisory development, in the form of both training and counseling. The terms "executive development" and "management succession" came into widespread use, fostered again by rapid industrial and business expansion which put a

premium on talent. Talent, whether executive, scientific, or skilled, became something to seek out, to safeguard, and to cultivate. Top management, fearful of retiring but afraid not to retire, found itself forced by retirement policies to seek ways of individualizing personnel decisions. A more systematic approach to vocational development in business and industry thus resulted from the convergence of a number of influences (87, 88).

Continuity. The concepts of management succession and of executive development involve the recognition of the need for continuity in management, and imply recognition of the fact that this is to be achieved by continuity of planning of vocational development. Companywise, it is seen as personnel planning and personnel development, but when applied to the individual, it manifests itself as the development and planning of an individual career. It is vocational development. The individual's potential must be assessed early in his relationship with the company, so that his growth and advancement may be facilitated, and so that dissatisfaction may not take him and his talents elsewhere if the company can use them. He must be helped to understand his own capacities for development, so that he may aspire and plan realistically, whether for security in his position or for advancement to more demanding positions. Periodic personnel evaluations and reviews are called for, and are common practice in many concerns, with the results shared by supervisor and supervised alike. This is counseling for vocational development.

Career Pattern Theory. Knowledge of career patterns and life stages is important here, too, for it helps one to anticipate and plan for choices and adjustments before the need arises. The widespread mobility of semi-skilled workers, and the factors which lie behind it; the different mobility of professionals, and the values they seek to realize in changing employers or communities; the pathways to executive positions, and the factors related to following them; the floundering or trial of the early employment years, and how it may be minimized to retain promising employees; the drives and needs which bring about establishment, and how they may be harnessed for the sake of the enterprise; the maintenance stage, with its attendant problems of keeping up the pace, adapting to change, and finding the motivation to innovate without creating undue pressure; decline and retirement, with problems of tapering off, letting go, and finding satisfying roles after letting go—all of these problems encountered in personnel work are problems of vocational development, of career patterns and life stages. An understanding of these concepts and knowledge of the relevant facts are essential to the effective planning and conducting of a personnel program.

Staffing. The planning of personnel programs which take into account the facts and theories of individual differences, of vocational development, and

of career patterns cannot be done by men who are not familiar with the fields of vocational psychology and occupational sociology, however able they may be at management. Management needs knowledge to be effective, and this knowledge is not, except in exceptional instances, the knowledge of management. Neither can the execution of programs of vocational development be entrusted to men and women who do not have the skills of vocational orientation, appraisal, and counseling, however competent they may be at supervision, at job analysis, in teaching, or in secretarial work. The training called for is training in personnel psychology, with emphasis on the fields of group dynamics and counseling psychology, including also the study of measurement, social psychology, and educational philosophy and methods. Standards have not been as well defined here as in some other fields of applied psychology, although many universities offer programs in personnel psychology and in applied social psychology.

CONCLUSIONS

As the National Manpower Council (372:25–27) and Bordin (43:20), in different contexts and apropos of different topics, have pointed out, vocational guidance has for some fifteen years been overshadowed by personal guidance, by guidance focusing on personality problems and personal adjustment. This has been for a variety of reasons, partly because work in individual differences and their implications for and application to vocations had reached a plateau which made it seem static, and partly because exciting new advances were being made in the study and treatment of personality.

But the fusion of these various trends in the developing field of counseling psychology (44, 118, 319, 369) has infused a new life into vocational guidance. As one of the functions of counseling psychologists, it has been given a broader focus, has acquired new meaning, and has developed new methods. Developmental psychology, occupational sociology, and the psychology of personality have been drawn upon to supplement differential psychology in formulating the concept and theory of vocational development.

With the emergence of theories of vocational development (22, 35, 123, 126, 158, 159, 214, 289, 315, 316, 323, 333), the field of vocational guidance has demonstrated a new vitality. Important research is being carried on in a number of major universities to test and refine these concepts and theories. Applications are beginning to be made and to appear in the literature (71, 211, 276, 382). Further progress in vocational guidance may be anticipated as these reinterpretations of theories, principles, and practices become more widely known, more fully integrated, and more widely accepted.

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